

# COAL AGE

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No. 25

## Some Interesting Comparisons

With Russia out of the fight, the war situation is mighty serious. We have the resources in men and money, as shown by the following statistics compiled from reliable sources, but we must stop fiddling about and exert every ounce of our force if we are going in to win.

	Per Cent.		Per Cent.
Of the warring nations, the land owned by the Entente Allies (with Russia and the United States included) is approximately .....	9.44	Italy .....	39.0
Of men of military age, exclusive of Asiatics and Africans, the Allies have .....	78.5	Russia .....	16.0
Of men actually enrolled in all the armies and navies, the Allies have .....	66.0	Japan .....	14.0
Of national wealth of all combatants, the Entente Allies have .....	80.5	United States .....	8.0
National income of the Entente Allies .....	83.1	Germany .....	65.0
Combined debt of the Entente Allies, proportionate to their wealth .....	14.7	Austria-Hungary, about .....	31.0
Combined debt of the Teutonic Alliance, proportionate to their total assets .....	28.0	With Russia out of the war the position of the Entente Allies is not quite so favorable. However, they still control:	
Interest charges of the Allies .....	4.6	Land area .....	90.0
Interest charges of Teutonic Alliance .....	11.8	Populations of nations at war .....	67.0
Men killed, wounded or made prisoners:		Enlisted men .....	60.0
Allies, about .....	9.0	In the matter of actual wealth the loss of Russia to the cause of Democracy is not so portentous:	
Teutonic Alliance .....	20.0	Russia's wealth .....	\$58,000,000,000
Proportionate amount of their total wealth expended in the conduct of the war:		Russia's national debt (a debt greater than that of any other nation) .....	\$24,000,000,000
Allies .....	12.0	National wealth of Allies (without Russia) .....	\$495,000,000,000
Teutonic Alliance .....	29.0	Total national wealth of Teutonic Alliance .....	\$134,000,000,000
Each nation's man power enlisted in Armies and Navies:		Wealth of United States .....	\$225,000,000,000
United Kingdom, including colonies .....	50.0	Wealth of United States over total wealth of all nations at war with the Entente Allies .....	\$91,000,000,000
France .....	46.0	Debt of United States, little more than .....	\$7,000,000,000
		Debt of Teutonic Alliance .....	\$40,000,000,000

**T**HE FACTS STATED ABOVE show plainly that the Allies should win hands down. However, to beat Germany we must organize ourselves from the oldest right down to the youngest. The part we coal-mining men are to play is no small part—fuel is vital. The sacrifices we have made so far are as nothing compared with what we must make in 1918.

There must be no factories closed next year because of a coal shortage, and there must be no long lines of shivering humanity waiting to buy a bag of coal at every fuel yard in the big cities. We know the railroads have been mostly to blame, but the coal industry is not without cause for censure. Let us keep our record clean next year and work with 100 per cent. efficiency. Let us consecrate our time, our wealth and our very lives to our country.

## Ideas and Suggestions

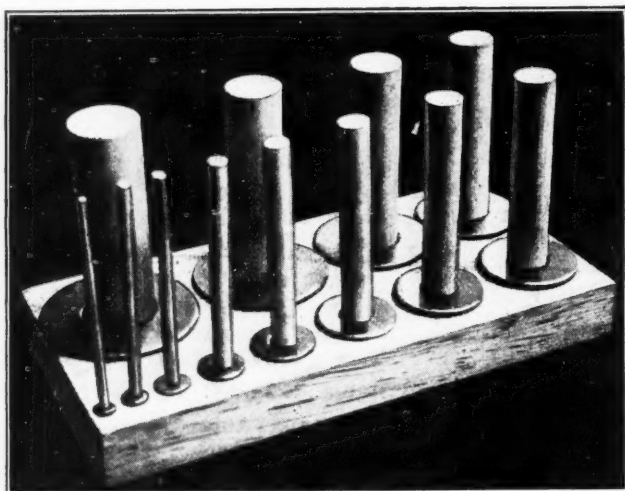
### Wooden Tamping Bars

In common perhaps with other operators throughout the country, the writer has always experienced more or less difficulty in obtaining proper wooden tamping bars. Wooden tamping bars cut in the woods are likely to warp, and to make them up out of split hickory or ash is not only costly, but it is extremely difficult to produce good results.

We have found at last that hay fork handles, straight and up to 8 and 10 ft. in length, can be secured and that they will serve admirably for the purpose of tamping high explosives. This idea is being passed along for the benefit of operators who have difficulty in getting the proper kind of tamping bars.

### Holder for Assorted Washers

The photograph shows a washer holder that I use and find convenient for holding round cut washers; its construction and utility for shops and plants seems so obvious that a description is unnecessary. The same



PINS AND WASHER SIZES CONFORM

kind of holder might be used for holding a few of each size of nuts for current use, but their greater thickness makes the holder cumbersome if many are put on at a time.—Power.

### Back to Rope Haulage

BY FRANCIS A. POCOCK  
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Thirty years ago electric locomotives first began to be used in coal mines for hauling mine cars. Up to that time the hauls, which were short compared to what they are today, were mostly mule hauls, where the ventilation conditions prevented the use of small steam locomotives.

Such locomotives were used to a considerable extent on some of the longer hauls where extra fans could be installed to improve local ventilation. A few rope-haulage roads were in use, and that brings me to the conditions that I now wish to consider.

Some of the electric hauls are of considerable length. I know of more than one that is over a mile long; and the mine is only shipping a small output. Why? Because the single-track electric road with its one locomotive is working to its capacity, but the mine is crippled to such an extent that it is doubtful if it is really a paying proposition.

It would not be possible to get more locomotives for all the mines that are in this condition, for the electrical companies cannot agree to ship an order for new electrical material under nine months to one year. Even if they could fill these orders in time to be of any use in the present crisis, there is still the question as to whether it would be advisable to divert from Government work the amount of copper necessary for the transmissions.

The electric locomotive is almost perfect—in its place. But is its place the operation of long hauls, where half its time is necessarily the dead work of transporting empty cars to the inby end of the line? The speed of the machine is likewise necessarily slow, rarely over six miles per hour.

Would it not be well for mining men to consider carefully the old and well tried rope haulage under present conditions? The electric locomotive has done one thing, and done it well in the majority of bituminous mines. It has made the miners careful to drive straight roads. These do not run to water level and all around Robin Hood's barn, as they used to.

Thus it will be possible to install rope haulage over these long hauls, to place bypasses in them and to convey the empties in simultaneously with the loads coming out. The consequence will be that the capacity of the roads will be doubled. This, however, is not nearly all that will be gained by the addition of the rope haul as a feeder to the electric haul at the inby end of the line.

It will be found in practice that the rope haul is economical compared with the electric locomotive. In the first place there is no locomotive to consume power with a low efficiency, as calculated from the drawbar pull. It is a fact that nearly half of the power consumed is used to propel the locomotive itself. With the electric locomotive there is also the line loss and the losses arising from leakage of the current. These are considerable items in the yearly cost.

With the rope haul the conversion of steam power to direct pull is fairly efficient; much heavier trains can be safely handled, and the speed can easily be raised to as high as 10 miles per hour.

A comparison of the two systems might appear somewhat as follows: The electric haulage will handle three trips of 12 cars each, or 36 per hour, or 288 per day of

eight hours. The rope haul will transport, say ten trips of 12 cars each, or 120 cars per hour, or 960 per day of 8 hours. This means that with rope haulage we will get three times the tonnage over the same length of road for the same labor cost. Is not this worth considering? Again, the engines to do this work can be obtained and the electrical equipment cannot. The ropes for this work can be secured, and we ought not to use copper unless absolutely necessary. Also, if the men are not fully employed in the haulage work, they can be used for other work in the intervals. It should also be considered that if the endless rope system can be used there is a further saving in the coördination of the work all around. With this system the stream of cars can be kept constant, the continual coupling and uncoupling of the trips may be dispensed with, and the work at the tippie made much easier, for there is not the necessary rush occasioned by a trip of cars coming out together. Thus the rest of the machinery may be kept at work to the best advantage. What the actual saving through avoiding the coupling and uncoupling of cars will be is not easy to determine beforehand, but it should be remembered that there is an accident risk to the car coupler that is well worth eliminating, either through doing away with the coupling of cars or by employing some device that will obviate uncoupling every time a trip of cars has to be broken up in order to accommodate the antiquated contrivance that is today designated as a tippie. Surely where it is still necessary to employ the trip system of haulage there is some way in which this waste of men and time can be avoided. Something certainly should be done to eliminate the constant loss of time, men and money displayed in our present haulage systems.

Thirty years ago I advocated the electric haulage sys-

tem, and today I wish to emphasize the fact that we have gone too far to the other extreme. Our electric hauls are altogether too long for economy, and the older rope haulage systems are well worth more careful consideration than they have received. Of course, when

rope haulage systems are being considered, it is necessary that the sheaves, rollers, etc., shall be considered as vital factors in the system and not simply as adjuncts or necessary nuisances. They are vital to the life of the rope, and if curves have to be placed in the line must be considered with extreme care. There are plenty of men in the country who are capable of installing rope haulage systems and making them paying investments.

### Fifty-Two Gifts in One

There is no finer way of expressing your good will to the responsible men in your employ than by making them a Christmas or New Year's gift of a subscription to *Coal Age*—the paper that helps them to improve their work and obtain maximum results with minimum efforts. He who is already a subscriber to *Coal Age* is of course familiar with the constructive departments the paper contains. The "Discussion" columns, for instance, are invaluable to those of the industry who desire to gain more knowledge of certain subjects related to coal mining, while the "Inquiries" and "Examination Questions" pages are of extreme assistance to those who aspire to better positions. Most holiday gifts are outworn and forgotten in a few months; but here is one that lives and grows with each week—

one that will be a constant reminder to your men of your interest in them and a continual inspiration toward greater efficiency. *Coal Age* has prepared an appropriate card announcing your gift. This will be mailed to each one for whom a subscription is received immediately upon our receiving instructions from the donor.

## The Miner's Harvest

BY FRANK HALL

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IT IS a good time for the mine worker to take count of his opportunities and to give heed to the future. Fortune does not wear a continuous smile for anyone, and it is the wise man who in the day of plenty makes provision for the proverbial wet days of business stagnation and enforced idleness that are sure to come.

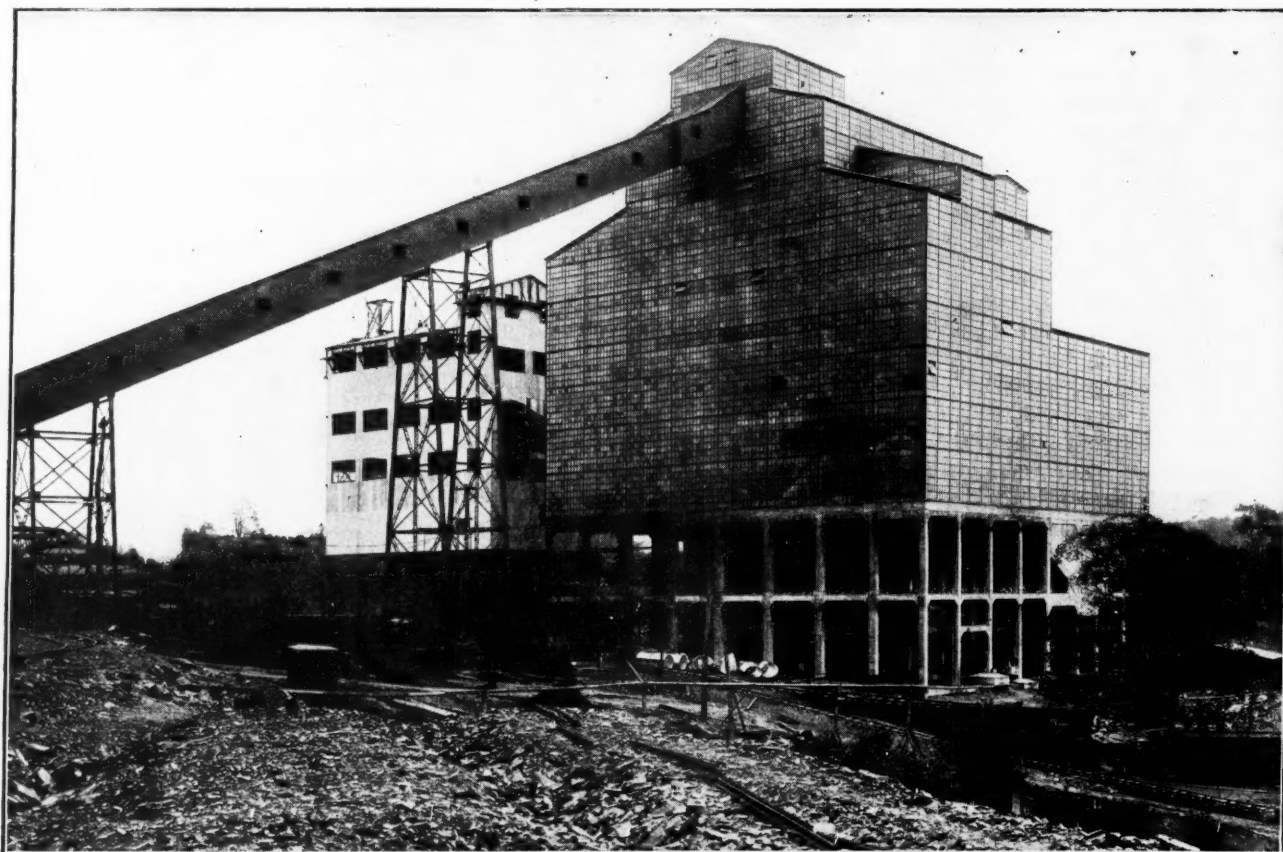
Never before in the history of the coal-mining industry has the maximum wage of the workers reached the high level of today. This is their golden harvest. Will the harvest be garnered or lost? As compared with the wages of ten years ago, or even two years ago, the present princely sums that find their way into the weekly pay envelope are beyond the most sanguine expectations of the most visionary of dreamers. From two dollars a day to five dollars, and in some cases eight, ten or twelve dollars, is a mighty stride in the upward scale. Reports of individual cases of extraordinarily high daily pay come from every section of the mining fields, and they are typical of what is true of the great army of workers.

The advance, it is gratifying to state, has been general, and all classes of workers are enjoying a prosperity such as they never before experienced. The consciousness of adequate compensation for their labor, the extreme pleasure of possessing a fat pocket-book, is theirs. Comforts, conveniences and a host of the agreeable indulgences that make life worth living have become possible in a very brief period under the fiercely active and urgent demands of the unprecedented business conditions that now exist.

It is pertinent to ask in this connection, Are these men, who at present are receiving a good deal more than a living wage, accumulating any resources for days to come that may not be so prosperous? It would seem that this is the time when every possible influence in the mining communities should be exerted to encourage a spirit of thrift and economy among the workers. Wise counsel and kindly suggestion would do much to aid in checking the very natural inclination to indulge in extravagance to the detriment of the future. The priest, the pastor, the Y. M. C. A., in fact all agencies that come in touch with the mine workers, should use their kindly and beneficent efforts to check the reckless expenditure of incomes and the great inroads that are being made upon the earnings of the workers by the drink habit.

Liquor is the curse of the mining communities. Its excessive use robs the wives and children of comforts and necessities and renders the workers unfit for their hazardous occupation. All strong drink should be banished, and at this very critical period when the production of coal is essential to the conduct of the war, as well as to the comfort of the people, stern, restrictive measures should be adopted to put a check on any agency that interferes with operation.





## A Modern Anthracite Preparation Plant

BY D. C. ASHMEAD  
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ONE of the most interesting structures in the anthracite region is the Loomis breaker of the Delaware, Lackawanna & Western R.R., Coal Department, near Nanticoke, Penn. This is a dry breaker, only pea and the smaller sizes of coal being treated wet. The breaker is a combination concrete and steel building, being built of concrete to the top of the loading pockets and from there upward of steel. The washer, however, is built entirely of steel. The floors in both structures are of reinforced concrete, and all the stairways are steel, with concrete treads. The washer and the breaker are so nearly fireproof that no watchman is employed and no fire insurance is carried.

The breaker is flooded with light by means of steel wire-glass windows  $\frac{1}{4}$  in. thick, which cover over 93 per cent. of the structure. The washer is covered with a combination of corrugated sheet iron and glass, about half of the surface being of the latter material. Sufficient light is provided electrically by 100- and 250-watt tungsten lamps to make the breaker as light by night as it is by day. The lighting current is 110 volts alternate current.

The breaker, which is thoroughly heated by the exhaust steam from the hoisting engines and the air compressors at about 3-lb. pressure, thus making the buildings comfortable for the men and boys and insuring good work in cold weather, has now been in operation for a little over a year. In the beginning there was a great deal of experimenting in its opera-

tion, but now the method of treating the coal seems to have been finally determined. Several changes have been made from what was originally planned.

Designed to have a capacity of almost 900 tons of coal a day, the Loomis breaker at present is being operated at only 3300 tons, greatly under its rated capacity. This is due to several circumstances. One of the six shafts has not yet reached coal, while another has just reached it. Two of the four shafts that are operating are not producing their maximum capacity, while the remaining two are working from 25 to 50 per cent. under capacity. This lack in production is occasioned by the mines being new and there not being sufficient development to produce normal tonnage. At the Auchincloss shafts, which could produce 1000 more tons a day if they had the necessary number of men, there is a serious shortage of labor.

ESTIMATED AND ACTUAL OUTPUTS OF COAL TO BE TREATED IN THE LOOMIS BREAKER

	Estimated Tons Per Day	Actual Tons Per Day
No. 1 Shaft (Loomis) .....	1,600	1,200
No. 2 Shaft (Loomis) .....	1,600	1,000
No. 3 Shaft (Loomis) .....	1,600	50
No. 4 Shaft (Loomis) .....	1,400	
No. 1 Slope (Loomis) .....	400	
Nos. 1 and 2 Shafts (Auchincloss) .....	2,000	1,000
Totals .....	8,800	3,250

The breaker is located about halfway between No. 1 and No. 2 shafts. The coal from these two openings is hoisted from the bottom, 1000 ft. below the surface, on a self-dumping cage and dumped into a chute leading



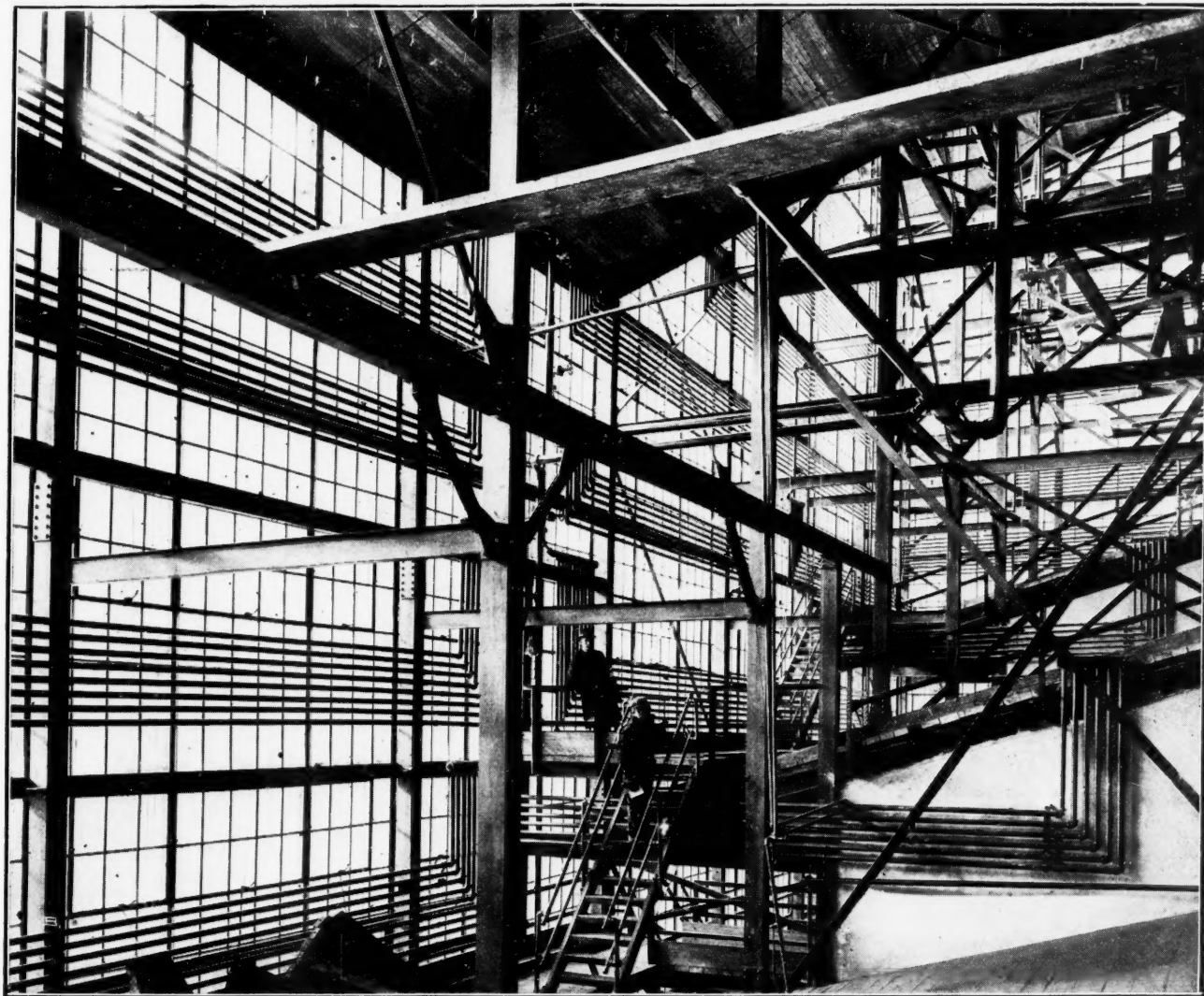
to a pit at the foot of the conveyor line to the breaker. The loaded coal cars from No. 3 shaft are hauled to the conveyor pit, about 3000 ft. distant, by a 13-ton Vulcan steam locomotive. When the No. 4 shaft and the slope are put in operation, coal will be hauled 1000 ft. in the case of the former and about 300 ft. in the latter. The coal from the two Auchincloss shafts are now hauled a distance of 2½ miles by a 28-ton Vulcan steam locomotive. All the coal from the Nos. 3 and 4 shafts, from the slope and from the Nos. 1 and 2 Auchincloss shafts, is dumped into the pit at the foot of the conveyor which leads to the breaker.

In this pit the coal is fed to the conveyor by a revolving feeder drawing material from the chutes and discharging to an oscillating feed table, which in turn feeds the main conveyor line. This conveyor carries the coal to the top of the breaker and has 10-in. by 5-ft. scraper flights spaced 4 ft. apart, which travel in a trough 36 in. deep. The length of this conveyor is 400 ft. The links are 2 in. in diameter. The pins holding the links together were found to be not sufficiently strong and new links have been ordered 1½ x 5 in. in cross-section. The conveyor travels at the rate of 130 ft. per minute and will have a capacity of 9000 tons per day when the trough through which it travels is filled with coal.

The coal from the conveyor is delivered into two sets of head shakers each 9 ft. long. Each set has three decks for the sizing of coal, only two decks being in use at the present time. The top deck has screens with 8-in. circular perforations, and the lump coal which passes over goes to a picking table where the slate is taken out by hand. The coal is delivered to a set of 46 x 48-in. manganese steel rolls built up in segments. These rolls have a knife-blade tooth, which materially assists in making a large percentage of prepared sizes, as this form of blade tends to cut the coal cleaner than the old type of blunt-tooth roll. Four men are employed to pick the slate and tend to the rolls and shakers on this floor of the breaker.

On the second deck of the shakers the steamboat coal is prepared. This grade comprises all the coal passing over 4½-in. and through 8-in. circular perforations, the coal being hand-picked by four boys before it goes to the second main rolls, which are the same in size and type as the first main rolls.

The coal from the first main rolls passes over the No. 1 shaker screens. The steamboat coal is separated here and goes from this shaker to the second main rolls. All the coal from the second main rolls and that which passes through the No. 1 shaker goes to the No. 2 shaker, which is 18 ft. long. On this latter



INTERIOR VIEW OF THE LOOMIS BREAKER, SHOWING GLASS SURFACE AND HEATING ARRANGEMENT







A VIEW OF THE PICKING CHUTES

burning silt amounts to about 12,000 tons, though when the plant is in full operation it will amount to 36,000 tons, releasing for the market a like amount of marketable coal. This in itself is a large saving and was perfected after the breaker was in operation.

The coal from the four-decked shakers passes directly to the storage pockets, from which it is run into railroad cars for shipment. All the coal prepared in this part of the breaker is treated wet, the water for washing being delivered by an 1800-gal. two-stage Lea-Courtney pump. Two of these pumps are installed in the power house. They force water to the breaker from the Susquehanna River through 4200 ft. of 10-in. Universal cast-iron pipe. Each machine is driven by a 150-hp. General Electric motor using 440-volt alternating current and operating at 1170 r.p.m.

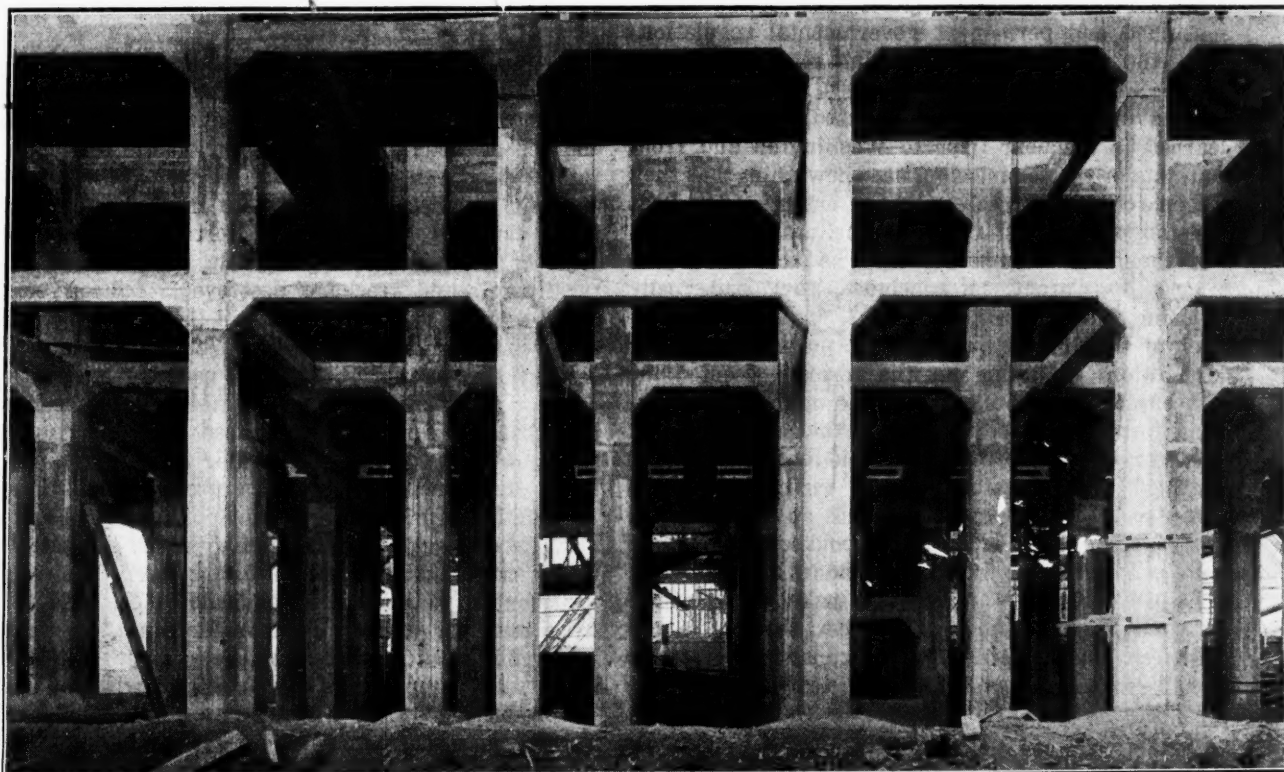
An interesting feature of the breaker is the arrangement of chutes serving the pickers in the dry section of the building. This arrangement is such that each picker handles unpicked coal only and does not, as is ordinarily the case, pick over material that the person ahead of him has picked. The company is now installing an Ottumwa box-car loader, so that it will be able to load any kind of railway equipment.

The breaker is remarkably free from dust. A 5 x 12-ft. fan exhausts air from the machinery where dust is produced. The rolls and shakers are inclosed, and the suction is capable of changing the air in the entire breaker four to six times every hour, making the building a clean and comfortable place in which to work.

All machinery in both the breaker and the washery is electrically driven. The shaker screens are driven by 25-hp. motors, the rolls by 25-hp. motors, the mechanical pickers by 15-hp. motors, the exhaust fan by a 75-hp. motor, and the conveyor by a 150-hp. motor.

Twelve men are used for the loading and the handling of the railroad cars. Two of these move the empties, weighing and running them to the loading chutes; one man tends to the patching of cars; one man is employed cleaning the cars; three men load the cars at the dry portion of the breaker and three men do the same at the wet portion; two men run the loaded cars to the yard and weigh them.

At the present about 40 men and boys are employed inside the breaker. A year ago the entire breaker equipment was in use to handle 3000 tons of coal per day. Under the new arrangement only one-third of the breaker equipment is utilized and 3300 tons of coal is prepared, the number of men and boys now at work in the building being less than half the number employed when all the machinery was in use. Another interesting fact is that only two sets of rolls are now used.



"CLOSE UP" OF CONSTRUCTION DETAILS OF BOTTOM OF BREAKER



## Short But Interesting Meeting in Kentucky

THE official record of the midwinter meeting of the Kentucky Mining Institute, held at Louisville on Friday, Dec. 14, will be a valuable reference volume, although the six set numbers on the program dwindled to three and although four sessions scheduled to extend over two days were merged into a sitting on one afternoon. Weather and other extraordinary conditions kept the members of the institute at their posts, and the attendance, about a score, included few operators besides the officers and those on the program.

Wiley B. Bryan, fuel administrator of Kentucky, appeared before the institute for a few moments, complimented the Kentucky operators on their proved loyalty and urged that they impress on their employees the necessity for intensified production. There must be increased production and improved distribution, Mr. Bryan declared, if the war is to be won. Governor A. O. Stanley of Kentucky could not be present, nor could the army officer who was to have spoken on the results to be expected from the men secured by the selective draft. President K. U. Meguire, of Louisville, president of the Harlan Coal Co. and affiliated companies, expressed the sense of the meeting when he suggested that the program be carried out as fully as possible and that everybody go back to work for the good of the cause through a full-time Saturday.

### THEY DIDN'T KNOW THEY WERE LOSING MONEY

Mr. Bonnyman discussed in detail the Federal Trade Commission report, commenting on some of the items and, generally, indicating that he felt the work of the Government in this connection will be much to the advantage of the coal-producing trade. He expressed the opinion that the coal-mining industry may look forward to continued and permanent governmental regulation, much as the railroads are now being regulated by the Interstate Commerce Commission. In the case of the companies with which he is connected, he said, what he learned in frequent trips to Washington and from accountants of the commission, has shown him that they had been fooling themselves to the extent of at least 20c. a ton on the cost of producing coal. Where at one of their older companies they had claimed to be making a 10c. profit, he concluded, they had really been losing that amount.

Much of the difficulty which has been experienced by coal operators in filling out the forms presented, he stated, has probably been due to the methods of bookkeeping formerly in use. He noted that after the first of the year revised forms will be put out, after which he advised that operators change their bookkeeping methods and cost-accounting systems to conform. It is easily possible to have good bookkeeping systems and poor cost-finding systems. He added:

"The Government wants us to make a reasonable profit, and wants us to make proper charges in our cost sheets; and, in order that we may be allowed a reasonable profit, we will have to learn how to make proper returns on our operations to the Government, because, at least for the period of the war, our costs will be the basis on which the Government will fix the maximum price at which we may sell our coal."

Going into the details of the reports, Mr. Bonnyman suggested that the charge for "Power House Fuel" be made a little below actual cost for safety. Royalties and lease payments, he said, "should be set up on the books as deferred assets and not thrown into the cost of production until actually a loss." He expressed the opinion that a 10 per cent. allowance for depreciation would be accepted by the Government. Charges under the head of "Maintenance Reserve" must be charged out at a uniform rate per ton during the year of delivery of the new equipment. As to "Contingent Reserve," he believed the commission would accept charges of from 3 to 10c. a ton, according to circumstances, and that reasonable increases in salaries of officers of operating companies would be approved.

The paper by T. E. Jenkins, which was the second to be read, developed a discussion of the settlements made by the company following the disaster. During the last ten years the company has carried its own workmen's compensation insurance. Every claim growing out of the disaster, with one single exception, was settled satisfactorily and on a more liberal basis than provided for under the compensation act and, in the opinion of the company, at a lower cost by far than if insurance had been carried. The policy of the company is to pay full compensation on a basis of half-time for disability which exceeds six days. Fred P. Wright, general manager of the Crescent Coal Co., Bevier, Ky., stated that his company also carried its own insurance and that a liberal policy in handling claims of employees has proved an excellent help in maintaining the confidence of employees and in entirely preventing litigation. Three fatal accidents in the last three years—the only ones in the 31-year history of the mine—were settled without a suit being even threatened.

### RESCUE WORK IN THE CLAY MINE EXPLOSION

Mr. Jenkins' paper explained the nature and results of the explosion at the No. 7 mine on Aug. 4 last, and the methods used in carrying on the rescue work. Out of 190 men in the mine 62 were killed or died of their injuries, while 37 were injured. There was much evidence of the terrific force of the explosion, some of the bodies being terribly mangled and structural work and trackage destroyed. Edison electric lamps were used in practically all the work, one or two men with each shift carrying Wolf safety lamps for testing only. Canary birds were used by the bratticing crews. Approximately 150 brattices had to be rebuilt and cheap roofing paper was used in putting up temporary brattices with considerable saving of time.

An unassigned subject on the program was "Present Cost of Mining Machinery and Supplies as a Factor in Coal Production." It was taken up at the suggestion of President Meguire in open discussion. The biggest contribution to the debate was made by Harry H. Small, sales manager of the Goodman Machine Co., Chicago, who said he did not believe the present cost of machinery and supplies has anything to do with the volume of production. Cost was a matter of secondary and minor importance compared to getting the equipment, he said. He reviewed the situation in the machinery trade and explained why deliveries are slow.

Daily Cost Sheets for Mine Managers

By E. B. WILSON  
Scranton, Penn.

WELL systematized collieries, under normal conditions, run with the smoothness and precision of well-managed factories. In each case under the most capable supervision slight derangements will occur from time to time, but these, however, the capable manager will reduce to a minimum.

Good coal-mine managers attain their attributes by studying all phases of the business and analyzing the methods followed in the different departments. The executive ability attained in this manner must carry with it a certain amount of humanity and diplomacy, otherwise an exceedingly valuable attribute is wanting. The coal-mine manager must systematize the details of the various operations in order that he may keep his fingers on their pulse and not be too dependent on subordinates for information.

Among the affairs that the manager should follow closely is the financial condition of the operation, and

value daily, although as a check on the ability of foremen and as a means of comparison it might be of some use if compiled weekly.

Under normal coal-mining conditions company labor charges remain fairly constant, and if there is to be an abnormal increase the manager and foreman are to consult; the former is the responsible head of affairs, and the latter should not assume the responsibility of materially increasing the cost of production in his department.

While labor is the most expensive item in colliery operation, as stated, it fluctuates but slightly under normal conditions, whereas expenditures in other items are extremely variable; therefore, if the manager is wise, he will make use of a daily cost sheet.

One method of arriving at the daily cost of production is to aggregate separately the daily expenditures and receipts and then divide the former by the latter. This

DAILY EXPENDITURES										DAILY RECEIPTS									
Date	Store	Shop	Mines	Stable	Powder	Build-ings	Outside Labor	Inside Labor	Fixed Charges	Total	Store	Shop	Powder	Coa.	Build-ings	Total	Daily Cost	Cost to Date	Yearly Cost
2	135 60				520 00	14 25	56 00	227 50	37 15	1,000 50	210 16	5 64	50 00	500 00	33 00	798 80	1 252		
3	229 15			130 00		6 20	56 00	285 00	37 15	743 50	175 10	5 64	62 50	660 00	33 00	936 24	0 794	1 023	
4	175 25		300 00			10 08	56 00	276 30	37 15	854 78	182 76	5 64	45 00	600 00	33 00	866 40	0 986	1 010	
5	145 60						54 00	295 00	39 15	533 75	193 00	5 64	65 00	690 00	33 00	986 64	0 541	0 894	
6	310 00		640 00			5 25	58 00	310 00	37 15	1,360 40	215 15	5 64	30 00	710 00	33 00	1,094 79	1 242	0 963	
7																			
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FIG. 1. ENABLES THE EASY FOLLOWING OF DAILY AND MONTHLY MINING COSTS

to this end he should have daily cost sheets that will cover the entire plant. In coal mining the principal items debited to production are labor, supplies, build- ings, office expenses and, where the land is leased, royalty. The items credited to production are tons of coal shipped at a stated price, f.o.b. tippie, rents and miscellaneous sales of supplies to the employees.

The debits may be divided and subdivided under nu- merous headings in order to know just what each item entering into the cost of production totals, but this re- port requires considerable labor and is of no particular

ratio between the expenditure and receipts gives the practical cost of production even though the purchases may not be used in several months or extend into the following year; and while it may not represent the actual cost of mining for any one month, it shows the manager the financial condition of the enterprise, which is of as much importance. The wise manager anticipates lean times as well as fat times and provides working ammunition for the former.

To the general run of stockholders a cash balance is more pleasing than an inventory balance when ship-

DAY BOOK LEDGER TRIAL BALANCE SHEET														
Consigner	Date Recd.	Date Paid	Discount	Store	Supply House	Mines	Shops	Bldgs.	Stable	Credits	Debits	P. & L. Dr.	P. & L. Cr.	
Mathews & Co.	1/2	1/10	1 04	52 15						52 15	51 11			
Brown Shoe Co.	1/2	1/9	47	46 75						46 75	46 28			
Baltimore N. Co.	1/2	1/9	73	33 67						36 70	35 97			
Knocker Pwdr. Co.	1/2	1/31	10 40		520 00					520 00	509 60	189 06		
Fenwick Groc. Co.	1/3	2/3	3 24	162 17						162 17	158 93			
Columbus Pkg. Co.	1/3	1/13	67	66 98						66 98	66 31			
Rock Millg. Co.	1/3	2/5							130 00	130 00	130 00		196 65	
Crescent Flour Co.	1/4	1/15	3 45	175 25						175 25	171 80			
Hoeksanwat Car Co.	1/4	2/5	6 00		300 00					300 00	294 00		21 07	
Columbus Pkg. Co.	1/5	1/15	67	66 98						66 98	66 31			
Britt Hdwr. Co.	1/5	1/15	3 60	36 00						36 00	32 40			
Mathews & Co.	1/5	1/15	87	48 62						43 62	42 75		458 03	
W. Va. Rail Co.	1/6	2/6			640 00					640 00	640 00			
Brown Shoe Co.	1/6	1/17	6 00	120 00						120 00	114 00			
Richmond D-G Co.	1/6	1/17	1 03	102 60						102 60	101 57			
Newark Prod. Co.	1/6	2/6		87 40						87 40	87 40	258 58		

FIG. 2. COMBINATION OF DAYBOOK, LEDGER AND BILLBOOK

ments are small, and it should be to the manager. While most managers have daily reports showing the financial condition of the plant, for those who have not the simple forms illustrated may be used as a guide.

The form shown in Fig. 1, when bound in a book, will be helpful to those who wish to follow the daily cost of mining as well as the monthly. It can also be extended to show the average cost for every day in the year. The items for the sheet are readily obtained from the daybook and payroll, thus no additional work is entailed and the sheet may be handed to the manager early in the morning before he takes up his routine work. In addition to being a cost sheet, it affords the manager a means of keeping in touch with the expenditures in the various departments and enables him to anticipate needed material.

Under the heading "Fixed Charges," office and store salaries, taxes, insurance, etc., are lumped. Inside labor includes the price paid for coal per ton or car, together with wages of company hands. It is expected that shop and building credits will vary slightly.

The form shown in Fig. 2 will also be found helpful. The simple arrangement combines daybook, ledger, bill-book, and in connection with the form shown in Fig. 1 a trial-balance sheet.

This simple form of bookkeeping saves time both for the manager and the bookkeeper. In addition the manager knows each day what vouchers he should sign or what checks he should send out in order to take advantage of discounts.

## MINECDOTES

### Some Shattered Ideals

BY EXPERIENCE  
Houston, Pennsylvania

While traveling through a bituminous mine some time ago, I was accompanied by a bright, alert young fellow who was just starting out in actual mine practice. Hitherto he had been concerned only with the theoretical phases. As we went along from the surface to the inner workings there was, it seemed, little that escaped his observation. This delayed him at times so I had to wait for him to catch up. Finally, he started to ask questions, and they came so rapidly that, even if I could have satisfactorily done so—which I couldn't—I would have been unable to keep pace with him. And were it not that the possibilities lying behind some of his questions are so serious, it would almost bring laughter at his innocence of the wide diversity between the ideas of the theoretical mining man as he fancies they should be and what he finds in actual practice.

"Say, Mr.—, isn't this a gaseous mine?" he began.

"It is classed as one," I replied.

"Well," said he, "why are all these men using open lights and running electric motors on the intake and return airways? And the roads are very dry and badly in need of cleaning. Don't you think it would be much safer if this mine was worked with closed lights and the motors run only on the intake, and if the machines were of the inclosed type, the same as those at the mine right

below where we were at the other day? It's the same seam of coal, isn't it? I see by the report that the same state inspector comes here that inspects the mine below, and I notice he has recommended that closed lights be used and several other matters changed which tend toward greater safety. Why doesn't he insist on a compliance with his recommendations, he has the law to back him up, hasn't he?"

At the last question I turned and told him, "My boy, you answered your own questions by asking that."

The Yankee trick of thus replying to his interrogations stumped him for a while. But we came to the rear end of a motor trip and found it impossible to either pass by the sides of it or crawl over the top. So we started back to find a place to sit down and wait for it to move on. Then he started again.

"I thought the law required at least 2½ ft. of clearance from the widest part of the car on a motor trip on all haulage roads?"

"It does"

"Then why isn't there 6 in. of clearance down there?"

I saw that I was going to be pestered all day with such questions if I didn't do something, so I rummaged among a lot of papers I had and found a copy of the mine laws, and handed it over to him with the suggestion that if he lived long enough he would learn lots of things he hadn't learned in school. "The law," I told him, "is all in there in black and white, but the answers to most of your questions is on a page they forgot to put in."

The following morning, while we were on our way to the mine, he started in again. He must have sat up all night reading mine laws, for he began from the back of the book to ask questions.

"What is a gaseous mine, anyway?" was the first one he dug up, "or when can a mine be termed 'gaseous'?"

"That question," I told him, "was discussed in *Coal Age* some time ago, and I would suggest that you write the editor for a copy containing it. But in the meantime," I added, "as I construe Art. 28, Sec. 2, no mine is gaseous where less than ten men are employed; but if more than that number are working, it is considered gaseous if a 'cap' shows on an approved safety lamp."

This seemed to give his active brain more to think of regarding the subtleties of all laws, and mining laws in particular. All was lovely silence until we came to a rib where the miner had decided that a deeper hole and a little more powder would save a lot of labor. The shot was misplaced and considerably on the solid, and I drew the miner's attention to the possible results of such a shot and gave him a few instances of what such shots had actually done.

"When is coal 'properly mined,' anyhow, as the law terms it?" my companion asked on the entry.

Again I used the Yankee's method. "What does the law say?" I asked.

He replied promptly: "That the coal shall be undercut, centercut, topcut or *sheared* by pick or machine, and in either case the cutting shall be as deep as the hole."

"Well," I told him, hardly repressing a smile at the ambiguity of the law at it reads, "that shot we just condemned certainly complied with the mine law. It was *sheared* on three sides!"



# Coal Mining Institute of America Meets—II

By R. DAWSON HALL

*This section of the article deals with the discussion of the problems in the question box. In sequence, carbide lamps, blasting times and methods, bonuses, day and ton payments, fragile and resistant stoppings were discussed with unflagging interest.*

IN THE previous instalment reference has been made to the business meeting during which the members paid a delicate compliment to their judgment of the year previous by reelecting the officers of that year. It also records the discussion relative to the first question presented for consideration. This instalment proceeds with the question box, the next query introduced being:

*Why should the Associated Companies attach a penalty to the non-use of carbide lamps in open-light mines?*

The Associated Companies' representatives objected to being singled out as victims of this criticism. They declared that the state and a mutual company were in agreement with them in the advocacy of carbide lamps in so far as carbide lamps were demanded. Sim Reynolds defended the companies from any suggestion that there was any desire to introduce hazardous practice into the mines. H. M. Wilson said that the more hazards the Associated Companies forbade the larger would be their insurance collections. All that the insurance carriers desired was to be fair, to specify the real hazards which should be removed and not to declare anything a hazard which was not rightly so to be regarded.

The pulling in general will agree with the Associated Companies that carbide lamps which furnish a better light than oil or sunshine lamps are the more desirable in many places. The sweeping support given to them in earlier rulings of the Associated Companies showed perhaps somewhat more zeal than knowledge. It cannot be said that this organization can learn nothing. It has already modified these requirements. Today carbide lamps are not demanded when the mine inspectorate opposes their use.

The general opinion is that a carbide light is not as good as an oil torch for a triprider, a locomotive engineer or a mule driver. When the trips make, at points, or generally, a speed such as makes the keeping of a carbide lamp alight difficult or impossible, it should not be used.

Somewhat generally it is condemned in places where the air is not of the best quality. It is true that men can live where a carbide lamp is extinguished, but it is generally felt that it is not well to ask men to work in the twilight zone between the extinguishment of an oil lamp and the extinguishment of a carbide lamp, though this can be done with reasonable safety.

As the rule now reads, there is no requirement of the Associated Companies or of the state that carbide lamps shall be used when mine inspectors take exception to its use. As W. L. Affelder explained, the carbide lamp was a danger to man and mule when trips were taken down steep hills.

J. W. Paul stated that those who talked so confidently about the risks of explosions of carbide lamps and containers overlooked the danger of explosions in the use of the old oil or "Sunshine" torch. The sparks from such a lamp were quite apt to set powder on fire prematurely. Burning oil, in fact, is apt to drip from the oil-lamp spout if the wick is not tightly fitted. He stated that the smell of the carbide light arose not from the acetylene gas, which was odorless, but from the impurities. The impurities in acetylene are not present in sufficient quantities to be in anyway deleterious.

In reference to the danger that men with acetylene lamps will work in air depleted of oxygen or having an excessive percentage of carbon dioxide present, E. N. Zern said that it was interesting to note that the Colorado report for 1915 showed that three men who had carbide lamps were asphyxiated in that state in the year of record.

One man declared that he had found that in going into blackdamp he could only penetrate 12 ft. farther with a carbide lamp than he could with a "Sunshine" lamp. He found that the carbide lamp would resist wind just as effectively as one burning "Sunshine."

## HOW UNSPENT CARBIDE SET FIRE TO A MINE

Joseph Arkwright said that carbide lamps were possibly the cause of mine fires. Some refuse carbide was thrown in with a lot of wet but combustible debris. It caught fire spontaneously. Another member declared that while sparks could not fall from a carbide lamp coal particles could and did enter the acetylene flame, and as a result sparks were formed which might ignite powder. Question 4 ran as follows:

*Does private ownership of railroad cars facilitate the movement of coal?*

Though presented to the institute, no one wanted to discuss it. Strange to say, Question 2 had been ignored in the vote and was regarded as of such little interest that no one spoke for its introduction. That this question was not discussed marks an advance in the institute toward a technical goal. The question was as follows:

*How far should the Pennsylvania mine foreman be held responsible for the cost of production, considering the strict definition of his duties found in the mine laws?*

Question 5, however aroused some debate. It was as follows:

*What is the proper time of day for the blasting of coal, what precautions should be observed preliminary to blasting and by whom should the work be done?*

John Lane said he knew when he wanted shots to be fired—when he wanted coal and at no other time. He did not doubt, however, that the best and safest time was when the men were out of the mine.

A. N. Young, mine superintendent of the Hillman-Neff Co., Masontown, said that it was more efficient to shoot the coal face at two separate times and not to attempt to shoot it all down at one and the same time. Where the shooting is done at night, the whole face must be shot down at one time if the shotfirer does not retrace his steps.

his steps. There seemed to be no argument. All favored blasting after working hours, though Sim Reynolds assented to A. N. Young's contention that it was more economical of the condition of the coal to shoot the coal face twice. Elias Phillips, a state mine inspector, said that any time of the day was suitable if the mine was properly ventilated, unless the coal was shot off the solid. In that case the law required that the coal be shot at night.

One member said that the law required that the mine foreman should designate when shots should be fired and a notice of the time must be posted at a conspicuous place at the mine (Sec. 9, Art. 4, Act of June 9, 1911). In proposing this question, as he had done, he said that he desired to hear from others at what time they thought coal should be shot. He said he preferred the day as far as production was concerned. It was most convenient, if not best, to let the men shoot whenever there was coal ready for shooting.

He favored the use of shotfirers for safety and thought they should be possessed of fireboss' certificates, if they worked in mines which were gaseous. He believed that there should always be two shotfirers so that any fires started by one of them would be extinguished by the buddy who followed after him, before the fire had time to gain serious headway.

#### SHOTFIRING AS A MEANS OF INCREASING OUTPUT

Oliver P. Stone, mine superintendent of the Waltersburg Coal Co., said that any time would serve if the coal was undermined; but where coal was not undermined the coal should be shot at night. W. L. Affelder said he thought that by shooting at night the mines would be ready for the loading of coal in the morning. Though a convenient plan was to shoot coal at will, there were advantages in arranging to do work in a methodical way. By a regularity in system such as shotfiring provided a larger output could be obtained.

Question 6 aroused more discussion than any other, though much of that discussion was highly irrelevant. However it is often the irrelevant debate that is the most interesting. The question reads:

*Is the payment of bonuses to miners a satisfactory method of compensation?*

F. W. Cunningham, the state mine inspector at Somerset, said that in his district the giving of bonuses to officials was not found a good practice. He said that some mines had gone bonus-mad. At two mines in his district the bonuses for two weeks had been \$14,000. The bonuses paid had been the cause of strikes. As a general rule companies have given up bonuses since the readjustment in wages.

Bonuses were given for every kind of service in aiding production. Some gave bonuses to those who worked steadily, others gave them to those who kept a certain number of boarders. At others the award was given to those who produced a large tonnage. At these mines the men cooperated to beat the bonus. A would arrange to put his checks on certain of B's cars, so that A would appear to have mined a large tonnage and would receive a big bonus which A would then kindly divide with the coöperator B, paying him also for coal which he had loaded out, but which was credited to A on the company's books.

W. L. Affelder said that some operators tried to

arouse the interest of the women in their husbands' production, and so would offer sacks of flour and other merchandise as bonuses for large output. He said that some of these bonus plans were successful. At one mine employing 68 men before the bonus was introduced only 22 per cent. of the men worked full time, whereas after the bonus was established 33 to 54 per cent. of the men worked every day. The average was 41 per cent.

Elias Phillips said that at a new mine where payment was wholly by the day the men were paid 50c. a day extra if they worked six days steadily and a further 50c. a day extra if they worked every day for a month.

It was during this part of the meeting that a discussion on the disadvantage of piece work arose and was hotly debated. It was conclusively shown that just at present any piece of work done by daymen was almost sure to cost more than if done by the job. On the other hand, it was also shown that the day-labor part of coal mining was done cheaper now than a quarter century ago and the piece-labor part of coal mining now costs much more than it did then. This does not mean that day laborers are working harder than they were at the earlier date, but it rather shows that the men who are paid by the day have had their work continuously lightened by mechanical aids. The operator had to take care of these men and help them take care of the output or else lose all the money he had put in the coal venture. Question 7 was then discussed:

*What are the prime requisites of a satisfactory permanent stopping?*

W. L. Affelder explained that the question was his. He said that he had recently had an explosion at one of his mines, the light character of which he ascribed to the weakness of the hollow-tile stoppings installed. These were blown over at the first blast. He thought that as the explosion had a chance to vent itself, it was unable to raise the coal dust and perpetuate itself, and he desired to know the opinion of the institute as to the advisability or inadvisability of putting fragile stoppings in mine crosscuts.

#### WEAK STOPPINGS DO NOT STOP EXPLOSIONS

George S. Rice declared that he feared too much stress should not be put on the weak stoppings as a means of preventing the extension of mine explosions. There had been bad explosions where stoppings were weak and where they were strong. The experiments at the Experimental Mine appeared to show that fragile stoppings would not have the beneficial effect with which Mr. Affelder seemed disposed to credit them.

Edward H. Coxe urged that though the light stopping might, by its yielding, cushion the explosion, it permitted the gases to reach parts of the mine which would have been made immune by a strong stopping, and thus the men were asphyxiated though the explosion was made less violent. He said aphoristically, "You stop your explosion, but you asphyxiate your men."

W. L. Affelder wondered if this were a correct statement. Given perfectly resistant stoppings, the explosion might gain such proportions as to make it far more destructive in every way than if it had been extinguished by easy expansion near the point of origin.

(To be concluded)



# Economy of Mining Coal by Stripping\*

By E. C. DRUM

First National Bank Building, Pittsburgh, Penn.

**SYNOPSIS** — *The operation of mining is much simplified by the stripping of the surface. There are 150 large stripping shovels already at work producing about 150,000 tons per day at a price which the author declares is about one-third that of underground mining.*

**T**HE coal in the bituminous-coal districts of the Middle States was mined, up to 20 years ago, entirely by deep-mining methods. The coal which cropped or which had a covering less than 30 ft. thick was regarded as absolutely worthless except for domestic use on the farms where it was located.

Only in recent years has such coal been analyzed for its chemical contents and its thermal powers tested. The coal was held of little value because it was discolored, being usually either red or yellow, and because it had the appearance of lignite. Hence in Pennsylvania, Ohio and Illinois this coal was until recently left undisturbed.

In other states where coal was found close to the surface, as for instance, Kansas and Missouri, and where the freight rates for bituminous coal from the Pennsylvania, West Virginia and Ohio fields prohibited the use of bituminous coal mined in those states, the local coal deposit near the surface was recovered either by pick and shovel, or with teams and scoops, and was found to be a good fuel. As the manufacturing interests in these states demanded more fuel, and as the wood supply diminished, larger stripping operations were started.

The cheapness with which the coal was produced by pick-and-shovel and scoop methods, and its value as fuel, attracted attention; and it was not long before near-surface coal began to be mined by steam shovel. The first of these was installed in the Pittsburgh (Kansas) field and was a 95-ton Vulcan shovel, with a

\*Article entitled "Coal Mining by Stripping Methods," read Dec. 6 before the Coal Mining Institute of America at its annual meeting at the Fort Pitt Hotel, Pittsburgh, Pennsylvania.

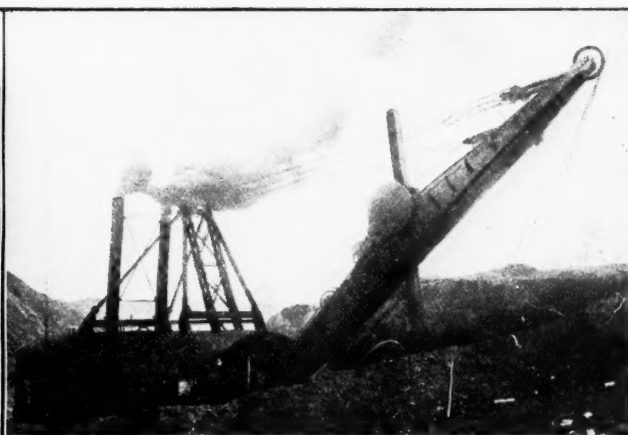


**EXAMPLE OF A STRIPPING WITH A LARGE SHOVEL**

Stripping of Harmon Creek Coal Co., Burgettstown, Penn. The cover is being moved with an 8-yd. Marion stripping shovel, and the coal is being excavated and loaded by a 1½-yd. Marion coal shovel. Coal is 5 ft. thick and cover is 30 feet.

1½-yd. bucket. Its performance attracted much attention. It could operate, however, only where the coal was found under shallow cover, possibly 12 to 15 ft. thick at the outside. As a result, steam shovels were designed with larger booms and greater bucket capacity, which would uncover coal economically where the overburden ran from 15 to 20 ft. These shovels had buckets with a capacity of 2½ to 3 cubic yards.

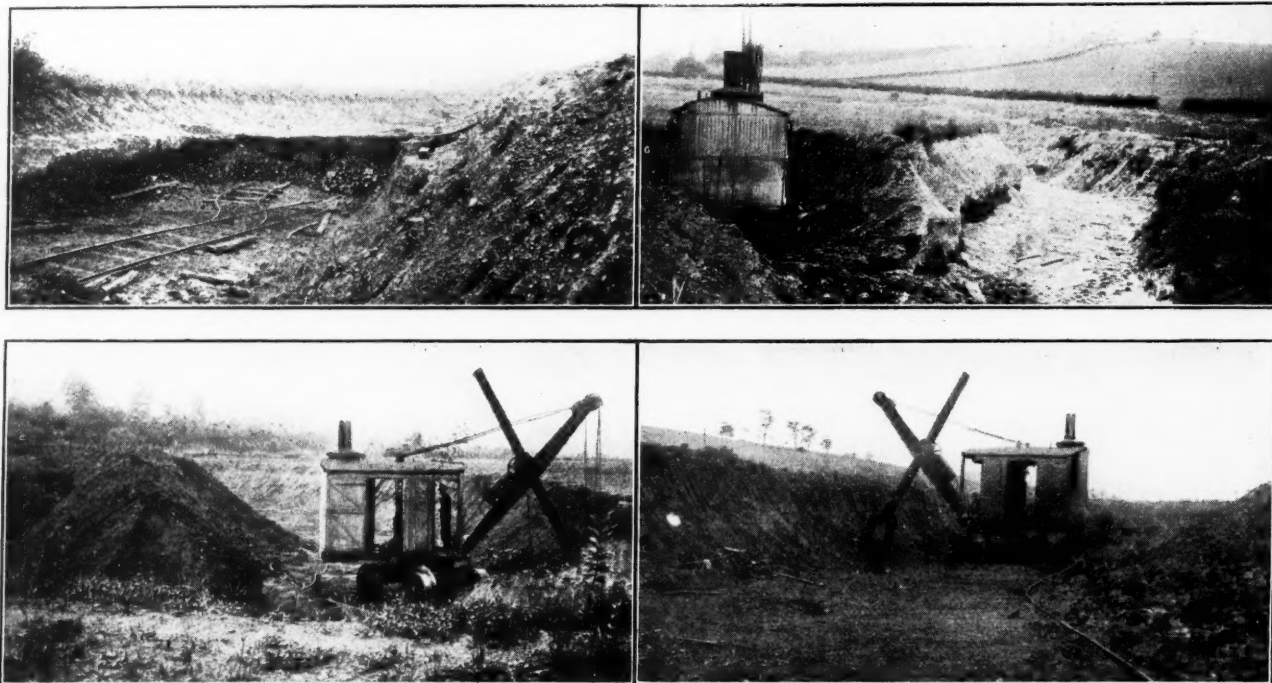
The operation of steam shovels in the western fields soon proved that coal-strippings could be made so eco-



**OTHER VIEWS OF THE COAL STRIPPING AT BURGETTSTOWN**

The left illustration shows the strip pit and the flat land surrounding it and the right a close-up view of the mammoth stripping shovel taking an 8-yd. bite





FOUR VIEWS OF THE SMALL 3-ACRE PIT OF THE WEST PENN COKE CO., UDELL, PENN.

The left-hand upper view shows the loading tracks for hand loading, the right-hand upper view the shovel making a box cut from the creek bed and the two lower views the shovel at work. The shovel is an Erie of only 3-yd. capacity. The cover ran from 3 to 10 ft. and the coal from 3 to 8 ft. Despite the slight cover the coal made excellent coke

nomically and that the quality of the coal recovered was so good that it would pay to undertake to strip coal having an overburden of up to 40 and 50 and possibly 60 ft. These conclusions brought into existence the modern steam or electrical shovels with buckets having a capacity of from 6 to 8 cu.yd. and booms from 80 to 90 ft. long. These are now installed, and they remove coal which 20 years ago was thought to be absolutely worthless, and at figures that when analyzed seem to be incredible to the man who all through his coal experience has been mining coal by deep-mining methods.

These modern shovels are now in operation in western Pennsylvania, West Virginia, Ohio, Indiana, Illinois, Kansas and Missouri, and are stripping coal often of equal value, thermally and physically, with that obtained by deep mining elsewhere. From such stripings at least 150,000 tons of coal a day are being obtained at a cost, where the plants are properly managed, of much below \$1 per short ton. This figure covers the whole expense of placing the coal on the cars at the mines, with all charges for exhaustion of coal, depreciation, overhead, taxes, insurance as well as the charge for the mining and loading of the coal in the pit.

With a plant properly installed, equipped and managed, coal can be produced by stripping which can be graded into run-of-mine, slack, nut or lump coal of different dimensions. Picking tables can be installed as part of the equipment so that slate or other impurities can be removed as completely from this coal as it is from that secured in deep mining.

Shallow coal cannot be mined in any other way than by stripping plant, and when it is so obtained the profits from its production and sale are as three to one compared with the profits usually realized from deep-mining operations of the same tonnage.

This truth is being borne home to the mine operators, and as a result in the states named there are at this

date at least 150 coal-stripping plants in active, profitable and satisfactory operation.

The advantages in stripping over deep mining, may be summarized in part as follows: (1) All coal deposits recovered; (2) no inspection; no mine foreman; (3) no underground ventilation or drainage system; (4) no accidents from falling roof, from shotfiring, from working in the dark or from gas explosions; (5) no deadwork charges to be paid for the driving of entries, stumps or ribs; (6) no bad roof and no squeezes; (7) no mules; (8) no artificial lighting system unless the pit works at night; (9) no miners; (10) the coal is really excavated, not mined; (11) in case of a shut-down, the expense is at a minimum; (12) the recovery of vast fields of coal heretofore considered useless.

After the coal has been removed, the land can be reclaimed at a little cost and the entire surface of the fields used for agricultural or stock-farming purposes. In fact, the disturbance of the surface improves the land for agricultural purposes, rather than spoils it. In most cases where the surface has been regraded, the value of the land has been increased.

## COMING MEETINGS

American Wood Preservers Association will hold its annual meeting Jan. 22-24, 1918, at Chicago, Ill. Secretary, F. I. Angier, Baltimore, Md.

United Mine Workers of America will convene at Indianapolis, Ind., Jan. 15, 1918. Secretary, William Green, Merchants National Bank Building, Indianapolis, Ind.

American Society of Civil Engineers will hold its annual meeting at the headquarters of the society, 33 W. 39th St., Wednesday and Thursday, Jan. 16 and 17. Secretary, Charles W. Hunt, 33 West 39th St., New York City.

## SOME INTERVIEWS

### *This One with a Commissary Manager*

It was about 10 a.m. when I entered this commissary. It was not on a Sunday, yet there were a number of men "burning daylight" out in front, and within were many more. From their talk and actions it did not appear as if they counted their labor or themselves as vital factors toward the winning of the war.

"Isn't there any way to keep those men at work?" I inquired of the commissary manager as he came out from behind the counter to greet me.

"The management has tried argument and appeals," he replied, "but with small success. However, I made a suggestion last week that may bring the desired results; at least that is what the G. M. of our company thinks, judging by the way he is acting on the suggestion."

There was no hint of conceit in this last remark, so I began to ask questions.

"The whole trouble, as I see it," he began, "is that under present conditions our miners are earning more than they require for their ordinary wants, and in consequence they do not see the necessity of working full time. They haven't learned the wisdom of laying something by for a rainy day, and their patriotism hasn't been aroused to a point where they give it serious consideration. The only thing that suggests itself to them when their payroll credit begins to climb is to lie around and loaf until their balance gets normal again.

"They have subscribed for some Liberty bonds, but the earnings of a day a week at most will easily take care of their subscriptions. If the war continues long enough, and the advertising campaigns boosting the successive bond issues become more and more effective, the time may come when their bond payments will keep them at work continually; but that speeding up can't give relief during the present winter.

"What I propose to do," he continued, "is to increase their wants so that they will be compelled to increase their earnings in order to meet the expenditures, and thus incidentally increase the output of coal. The plan is not original, of course, I got the idea from an article I read.

"We will begin our experiment with phonographs. We are fitting up that corner over there so that we will be able to display them attractively, and we propose to convince every family that phonographs are quite as indispensable as fried eggs or colored ribbons. Once we get the machines installed, the next step will be to boost the sale of records. If our inhabitants fail to realize that to the making of records there is no end, it will not be due to lack of enterprise on our part."

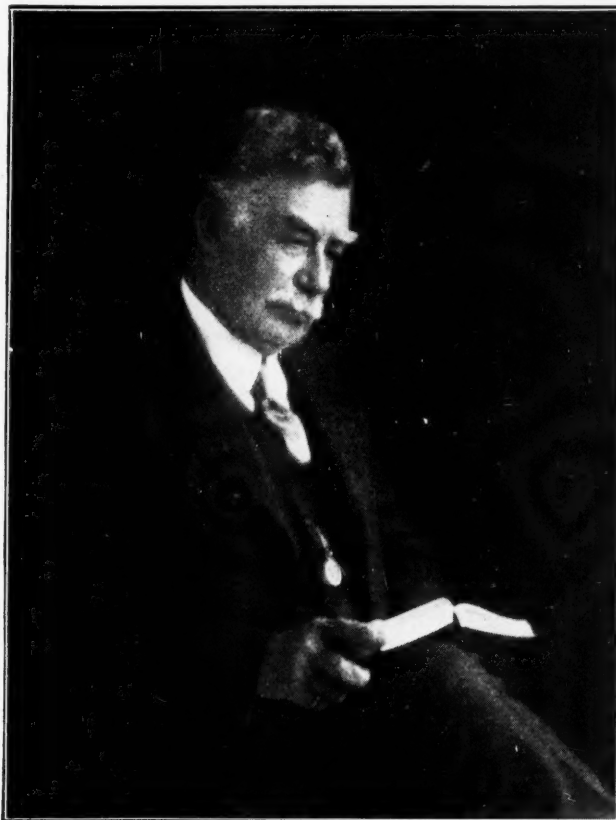
"But suppose the plan succeeds better than you intend," I ventured, "and your men acquire expensive habits and tastes that will absorb all or even more than they can possibly earn under the highest possible wage conditions; what is going to happen after the war when a readjustment of wages will become necessary?"

"I'm not good at supposing," he replied; "but suppose we first win the war, that'll keep us busy for some time at best."

## Frederick E. Saward

Frederick Edward Saward, editor and proprietor of *The Coal Trade Journal*, died suddenly on Tuesday evening, Dec. 4, after a day spent at his office seemingly in the best of health. Mr. Saward was born near London, England, May 12, 1846, but had been a resident of this city since the age of seven years.

As a boy he became identified with the coal trade, being employed by firms in the old Trinity Building, then the center of the wholesale coal interests of the Eastern part of the country. His father was engaged in the coal business on his own account, as were other relatives. This business connection led naturally to the



FREDERICK E. SAWARD

establishment on Apr. 21, 1869, of a trade paper devoted to the coal business, one of the first periodicals devoted to any trade or profession in this country, and a paper of which he remained in control throughout the remainder of his life.

For some little time after establishing his periodical, he continued in the coal trade and thus was enabled to make the publication thoroughly representative of the trade, speaking from the practical experience of a considerable number of years in the business. Since 1874 he had published also an annual statistical review of the trade, which was much sought after by students of the industry in public life as well as by men in business offices throughout the country.

Mr. Saward was regarded as a leading authority on coal trade information of a statistical and historical character, and as such was frequently consulted by representatives of the press from far and wide, a remarkable memory for statistics complementing his records on coal topics.



# News From the Capitol

By Paul Wooton



*[Men of the coal industry who find it necessary to get to the national capital on business these days are invited to avail themselves of the facilities afforded by the Washington Bureau of "Coal Age," which is centrally located in the Metropolitan Bank Building. The bureau is in charge of Paul Wooton, who is in a position to be of material assistance to those who have business to transact with Government officials. Have your mail addressed care of "Coal Age," Room 703, Metropolitan Bank Building, Washington, D. C., while at the capital.—Editor.]*

## Price Is Fixed on Bunker Coal

After long discussion and much haggling on the part of various interests affected, the Fuel Administration has issued an order providing that until further or other order of the United States Fuel Administrator, the maximum price of coal sold and delivered to vessels for foreign bunkering purposes or for export to foreign countries, except to Canada and Mexico, shall be the price prescribed for such coal at the mine at the time such coal left the mine, plus transportation charges from the mine to port of loading, plus \$1.35 per ton of 2000 lb.

To this price, computed as above, the seller of the coal, or such other agency as performs the actual work of bunkering or loading the vessel, may add the customary and proper charges, if any, for storage, towing, elevation, trimming, special unloading and other port charges, and is subject to all present and future regulations of the United States Government.

Nothing in the order is to be construed as affecting or modifying any of the regulations of the War Trade Board regarding coal for export or bunkering.

## Car Shortage Still Hampers Production

Bituminous coal production during the first week of December was maintained at the November level. The total production was 11,133,220 tons, which is at the rate of 1,855,537 tons daily. There was a slight decrease in the amount of beehive coke produced during the week under review. The total production was 618,494 tons as compared with 635,941 tons for the week ending Dec. 1. Anthracite shipments totaled 40,566 cars, which does not vary greatly from the average. These figures are compiled from returns to the United States Geological Survey.

During the week ending Dec. 1, the coal mines of the country were operated at 74.2 per cent. of full-

time capacity. Car shortage was by far the most important factor limiting production. Losses from this cause were three times as great as those due to all other causes combined. In West Virginia, a 20 per cent. loss of production was attributable to lack of cars. In the high volatile fields, losses due to this factor amounted to 49.4 per cent.

## Urge Preferential Movement of Coal

A resolution adopted by the directors of the National Coal Association urges the United States Fuel Administrator "to secure from the President an order to the effect that such an immediate priority be given the movement of coal now under load as will relieve the present emergency, and that further, for the next 30 days preference be given coal mines in the distribution of cars to the extent that may be necessary to operate all mines continuously at full capacity for the next 30 days, so as to supply at all points the amount of coal necessary to preserve the life and health of the people of this Nation, and to rush with all possible speed the powder mills, cartridge mills, steel mills and all other mills and manufacturing plants that are producing ships, guns, ammunition, food and clothing for our soldiers, and all the other supplies and equipment that are vitally essential to drive this war through to a victorious conclusion."

## Federal Trade Commission Blames Lack of Cars to Misuse

Imperfect transportation and continued misuse of coal-car equipment is still at the bottom of the present serious situation regarding coal, according to the annual report of the Federal Trade Commission, which was submitted to Congress last week.

The commission, which has for the past year had a large force of cost accountants, investigators and economists studying the coal problem, told Congress again what it stated last June in a special report—that there is a sufficient and adequate supply of coal cars, but that misuse of them makes capacity output impossible.

The commission quoted excerpts from its report of June 20, adding: "Passage of time has demonstrated the correctness of the commission's statement. The delay in the movement of coal cars—both loaded and empty—continues to limit the output of the mines. Movements of coal cars, so slow as to average 12 to



15 miles per day, are now matters of common knowledge. No effort at stimulation, either by way of exhortation to labor or increased prices to operators, can avail against the absolute limit of production set by the misuse of coal-car equipment, of which, if properly used, there is an adequate supply.

"The commission believes that subsequent events have demonstrated the correctness of the statement that 'the coal industry is paralyzing the industries of the country, and that the coal industry itself is paralyzed by the failure of transportation.'"

## Government Conserving Fuel

The following, in the form of a placard, is being displayed in practically every Government office in Washington.

### HELP US SAVE COAL!

- Turn out all unnecessary lights.
- Turn off motors when machine is not actually in use.
- Turn off all steam radiators excepting those actually needed.

## Shipping Suggestions to Operators

Under date of Dec. 6, an interesting circular letter, signed by the three operators' associations of Illinois, Illinois Coal Operators' Association, Coal Operators' Association of the Fifth and Ninth Districts of Illinois and the Central Operators' Association—was mailed to all operators in Illinois. This circular, which can be read with much interest by the coal trade in general, reads in part as follows:

Winning the war, after all, is the big consideration for everyone of us. As coal operators our responsibility is clearly defined. We are expected to provide an abundance of clean coal, sufficient to meet every requirement. By reason of the continued threat of coal shortage and all that might follow therefrom, both in embarrassment of our war operations and the discomfort of the people generally, the Federal and state governments are, from time to time, attempting to devise various corrective measures. There are many ways in which every coal-operating company in the state can materially help to facilitate and move a larger tonnage of coal with even the present supply of cars, and it is suggested that the following be carefully and regularly done:

1. Load and forward each day every car furnished. Leave no part loads under the tippie. If necessary, reset and complete the loading with mine-run.
2. Never send forward a car with less than the maximum load—full capacity.
3. Bill all coal direct to final destination. Avoid re-shipment. Insist on destination billing on all sales made through jobbers or other intermediaries.
4. To the greatest extent possible avoid commitment to a single size. On every order urge permission to apply other sizes—even mine-run.
5. Recommend during periods of extreme shortage that such of your customers as have a nearer source of supply place their orders with the short-haul mines. Explain to them the urgency of the situation and your reason for making such request. Numerous complaints reach the state administrators that arise not from a limitation of coal supply but rather of choice of coals—nearby coal is available, but the more remote coal is desired. The delicacy of such a trade situation and the damage that may in the future flow from abrupt refusal of the business offered under the present conditions would make us hesitate to suggest that such denial if exigency of the situation did

not demand it. It is reasonable to assume the average fairminded man will understand and hold no ill-will.

6. In routing shipments avoid cross-hauls whenever possible. Cross-hauls are of two types: One is where movement is by two roads to a given destination where it can be reached by a direct haul of a single line—thus avoiding any junction-point switching. The other is movement of a shipment to a connecting or belt line at a more remote point from ultimate destination, or by a longer or more circuitous routing than might be possible by another equally available line. Coöperate closely with the sales department in giving this matter careful thought. Study present routings now in use at your mine for serving your various customers and see if you cannot shorten the route and save time on coal movement. No railroad will at this time criticize or feel that you have denied them business by a shift of movement that will improve service as a whole. Remember, they have all they can do; some of them at times more than they can do.

7. Confine your sales to local line destination and the normal movement zones of the railroads serving you. This is not a time to seek or develop new markets, particularly at the expense of railroads serving you. This does not contemplate at all the denial of coal in times of stress to customers other than your own or to those individuals and districts to whom your attention may be called by Federal or state administrators. Do not stand on technicalities, formalities or excuse if you are asked to send coal to any point, especially where your mine is a short-line haul and the quickest relief. Remember, some soldier's family may need coal; and it is not charity that is asked, only service. If you cannot provide help find someone that can.

## Plan To Overcome Railway Congestion

A new procedure has been tried successfully in overcoming congestion in railway yards. F. C. Baird, of Cleveland, as the official representative of Dr. Garfield, went to the Russell and Silvergrove yards on the Chesapeake & Ohio R.R. and is reported to be making substantial headway in getting into motion coal which had been tied up in those yards. Shipments are being diverted to meet the most urgent needs. Most of them are going to Michigan. Daily statements of such diversions are forwarded to the respective shippers with the request that the coal be billed out to the new consignee.

SIGNIFICANCE IS ATTACHED to the action of the Fuel Administrator in conferring upon William K. Prudden, state administrator for Michigan, authority to close

## Dr. Garfield Addresses Editors

ON THURSDAY, Dec. 13, Dr. H. A. Garfield, the United States Fuel Administrator, delivered an address before about 100 editors representing the business press of the country, who were assembled in the ballroom of the New Hotel Willard, Washington, D. C., to get the first-hand views of high Government officials on the present national situation. Dr. Garfield in his speech, among other matters of the utmost importance to the coal industry, touched on the suggested new policy of using Government vessels, such as colliers, mine sweepers, etc., to transport coal to New England points and elsewhere. Dr. Garfield's address will be printed in full in *Coal Age* of Dec. 29, 1917, and should be of more than passing interest to the men in the coal industry. All readers of *Coal Age* are advised to be on the lookout for this valuable contribution to the literature on the coal situation, coming as it does from one who has such a broad knowledge of the conditions existing today.

industrial plants and amusement resorts if the action is necessary to furnish coal for domestic requirements.

# The Labor Situation

## General Labor Review

The labor situation is devoid of any untoward conditions except that many men are idle for lack of opportunity to work. The railroads have naturally been unable to cope with the storms. The difficulties resulting from inadequate equipment have been supplemented this week with those arising from an inability to use that equipment to advantage. We cannot blame the railroads, for the fault is largely with the coal industry for having assisted the general public in tying a can on the railroad business. Because the railroads have been improperly criticized and excessively and senselessly regulated, they are now unable to do their duty by the public even in the summer time and still less when snowstorms clutter up the tracks.

### CHRISTMAS FESTIVITIES TO BE SHORTENED

Fuel Administrator Garfield wants the mine workers and operators to keep the Christmas holidays down to the meagerest limits. He wishes that only one day, and that Christmas Day, be celebrated. He asks that New Year's Day be passed without any celebration. Every idle day involves a shortage of 2,000,000 tons of fuel.

The union is backing this action of the Fuel Administration at least so far as to urge that only Christmas and New Year's Day be celebrated at the present season. A declaration to this effect has been circulated.

The anthracite operations, by reason of better car service, work far more regularly than the bituminous, and at the anthracite mines the problem of tonnage is squarely up against the mine workers—and most manfully are they meeting it by overtime and persevering effort. Despite their reduced numbers they are putting out more coal than ever. The year will show an increase of more than 10,000,000 tons over last year. When the anthracite operators are met about the country their first word is in praise of the spirit of the mine workers in their region.

F. M. Chase, vice president and general manager of the Lehigh Valley Coal Co., has been trying to get the Slovaks and Greeks to cut down their attendance at funerals. It is customary to expel men from the fraternal organizations if they do not attend funerals of the deceased members of their order. But now the fraternal organizations are limiting to six the number of men who are allowed to assist in funeral obsequies, and they may soon be expelling men who lay off to assist in the interment of their fellow members.

### SLOVAKS DO NOT ACT LIKE ALIEN ENEMIES

The Slovaks are technically "alien enemies," now that war is declared against Austria-Hungary. Really they are the most ardent of the alien friends of the allies and of the United States in particular. Their action shows that this is so.

The anthracite mines are receiving many men who were formerly lured away by the higher pay of the munitions works. The increase in the wage of the anthracite mine workers is partly the reason for the return of these men, but another reason is the arrival of cold weather. The miner naturally tends to seek the warmer confines of the mines when wintry winds are whistling.

The merchants are helping likewise. They naturally want to keep the mine workers in the neighborhood. The munitions works also should aid. It is clearly not to the interest of the munition maker to deplete a business on which munition making depends. Even if the munition maker burns bituminous coal, the restriction of the anthracite output would cause demands to be made on the soft coal and so reduce the amount available for the making of guns and shells.

The action of the draft boards is unfortunately depleting the mines somewhat. Several of the draft boards in the anthracite region have failed to honor industrial exemption claims filed by corporate and independent coal operators.

Unfortunately, praise is not to be accorded to everyone in the anthracite region. The Lehigh Valley Coal Co., at the Dorrance shaft, has some men who are lacking in a sense of their national obligation and fail to appreciate their opportunity to render such service to their country as is offered to them by the regular supply of cars at the mines at which they work. On Dec. 15, 800 men and boys at the Dorrance shaft went on strike because the semimonthly pay was delayed until Dec. 17.

### SO UNLIKE THE ANTHRACITE MINE WORKER

It is, of course, extremely annoying when the Saturday pay is not forthcoming, and a good cause for a strike when there is no coal famine existing. But to go on strike with the cry "No pay, no work," because the paymasters were delayed in the Hazelton and Schuylkill region by reason of the congested traffic caused by the snowstorm, was wholly inexcusable. This is written strongly. We may be sure it is not any more vehemently expressed by us than it has already been expressed by loyal miners and leaders of the mine workers.

The Delaware, Lackawanna & Western R.R., Coal Department, will raise the salaries of the clerical force from 5 to 20 per cent., to date from Jan. 1.

### IF ONLY WESTERN PENNSYLVANIA HAD A CHANCE

The central and western Pennsylvania mine workers are working when they can. The cold is increasing their numbers, for the wanderers there also are seeking a "cover from the wind." But the cold which sends more miners sends also a shortage of railroad cars. The cars are slow to arrive and as slow to depart when loaded. Some which were filled before Dec. 7 were still on the mine switches on Dec. 14, and may not yet have been moved. Nearly all last week the mines in the Pittsburgh district which could load on the river loaded in that way, but the river froze at the end of the week and that mode of transportation was consequently closed. These mines are now idle, as neither boats nor cars are available. The United States Steel Corporation is building a fleet of three large steel steamboats and several large barges for use on the Monongahela River. This will relieve the railroads and make the corporation less dependent on the efforts of others.

### POWDER QUESTION IN OHIO HAS BEEN SETTLED

The conference between the Ohio operators and miners held at Cleveland, Ohio, relative to the price of powder has just been settled. On Nov. 9 the operators and mine workers at a meeting in the same city made the following resolution:

Whereas, The miners and operators of Ohio have failed to agree upon the price of powder; and

Whereas, We recognize the possibilities of trouble at the mines in that state, which would result in a reduction of tonnage; therefore, be it

Resolved, That the question of the price of powder be left to Fuel Administrator Hon. H. A. Garfield for decision. Such price to be effective at all mines in the state.

H. A. Garfield, the Coal Administrator, would not administer. He shrank from so bold a measure and sent John P. White to smooth out the difficulty. The miners wanted the price of powder kept to \$1.75. The operators wanted the price raised to \$2.45. The latter price is somewhat nearer what the operators have to pay. Those who convenience the miner by selling him powder should be allowed to cease



doing so or should be allowed a price which will make the selling less unremunerative. The mine workers cannot hope to see wages rise indefinitely and cost of supplies remain stationary.

It is a matter for rejoicing that the mine workers of Illinois have reelected Frank Farrington as president by a wide margin. The secretary, Walter Nesbit, was also reelected. After all, Illinois seems to be settling back into the harness. It will pull its share of the load from now on.

The Crescent Coal Co.'s miners at Evansville, Ind., recently went on strike to express their disapproval of the fact that the washhouse was not heated.

#### GARFIELD DECLARES FOR SUMMER DIFFERENTIAL

The mines in the Osage district of Kansas are being cleaned up preparatory to working. They have been idle since July 21 and only started working Dec. 10. About that date Dr. Garfield, the Fuel Administrator, modified the order of his Kansas representative, Emerson Carey.

Mr. Carey had ordered that the miners should receive 50c. additional per ton mined and the operators should sell the coal for 50c. more than heretofore. The operators impressed on Dr. Garfield the fact that a high price would work well in the winter, but put them out of business in the summer, when competition was more rife. In fact, the operator showed that it would not pay to prepare the mines for operation at much expense if when opened they could only be operated in the winter and must be closed in a few short months.

He decreed therefore that the wage and price increase should be operative only during the winter months and end Mar. 1, when the rush season comes to a close. The operators were satisfied and agreed to reopen. A rate varying with the season of the year is not by any means new. It has been in operation already in some districts. It tends to speed up summer operation and steady an unhealthy rush in the winter.

#### \$200,000 OF UNION MONEY FOR LEGAL SERVICES?

In Arkansas some mines near Sebastian were closed by reason of a strike on the Fort Smith Light and Traction Co.'s railroad. The Fuel Administrator succeeded in straightening out this matter after two days of idleness. The strike was one of the "sympathy" type, such as are common in the Kansas and Arkansas districts.

The attorneys for Franklin Bache, in his suit in the United States District Court against the United Mine Workers, have petitioned Judge Elliot that the court award them \$200,000, to be paid by the United Mine Workers, for their procuring of a verdict in favor of Franklin Bache of \$200,000 direct damages. The court awarded Franklin Bache, of course, not \$200,000 but triple damages, or \$600,000, as provided in the Sherman act. As the matter is before the court it is not a subject for comment—nor is comment needed. The facts speak for themselves.

#### ALABAMA MINISTER HELPS FUEL ADMINISTRATION

The mine workers in Alabama are working, though there has been no settlement of the matters at issue. They still insist on the 8-hour day and the abolition of the contract system. The local fuel board has sent Dr. A. C. Williams, a prominent negro minister, to the mines in the district. He will urge upon the members of his race the vital importance of cooperating to the fullest extent in maintaining full-time operations and maximum outputs at the mines. He has appointed a strong committee to assist him in this work, and he is confident of obtaining beneficent results.

The National Coal Association, or some like body, should secure men of every nationality engaged in mining to go around to the mines and address the miners on the importance of cooperation in the production of coal. Men who know the mines are not needed for that office. Preachers, politicians and public speakers of every kind are best suited to this work and will encounter the least opposition when they undertake it.

We publish this week the report of the Industrial Commission of Colorado relative to the Colorado Fuel and Iron Co.'s relations to its men. It is interesting to note that the

fourth grievance of the president of the United Mine Workers of America in Colorado was "Discrimination against members of the United Mine Workers of America." It is answered somewhat fully by the following quotation of the *United Mine Workers Journal* of Dec. 13, in an editorial entitled "Camouflage That Does Not Deceive." The editorial says: "The fact that fully 80 per cent. of the employees of the Colorado Fuel and Iron Co. have affiliated with the United Mine Workers is proof that there has been no general attempt to prevent organization through discrimination or violence as in the past. We have heard of isolated cases of discrimination by some petty boss or mine manager, but nothing to indicate a general program of repression."

An interesting strike at the coal mines at Blaenavon, in Great Britain, took place recently. A company official used offensive language to a woman employed at the furnaces and several thousand men went on strike. He had to apologize before the strikers would return.

### Colorado Commission Makes Ruling

The report of the Industrial Commission of Colorado on the alleged differences between the mine workers and the Colorado Fuel and Iron Co. has just been distributed to all the employees of that corporation. From this report the following facts are taken. On June 29, James F. Moran, president of the Colorado United Mine Workers, served a notice to the commission that the United Mine Workers of America would "abandon all mines operated by the Colorado Fuel and Iron Co. in the State of Colorado unless the present grievance could be adjusted before Aug. 1."

The commission wanted a list of the grievances, and on July 3 Mr. Moran promised that he would tabulate them in a few days. On July 16, not having heard from Mr. Moran, the commission wrote for the list of grievances promised. Mr. Moran in reply agreed to meet the officials and the Colorado Fuel and Iron Co. on July 26, just four working days before the time appointed for the "mine abandonment," or strike.

Mr. Moran refused to meet the commission and the representative of the company in the Capitol building. They ultimately met in the office of J. F. Welborn, the president of the coal company. Apparently, though about this the report is silent, the union men looked for this invitation, regarding it as a degree of recognition. Ultimately an investigation was made by the commission at Denver, Trinidad, Walsenburg, Crested Butte and Rockvale.

#### "UNION RECOGNITION" ONLY MATTER NOT ARBITRABLE

The main demand was for the recognition of the union. Mr. Welborn refused to consider this demand. Mr. Moran wanted an arbitration committee, one man to be named by E. H. Weitzel, the general manager of the company, one to be named by the miners and the third to be selected by the other two. Mr. Moran demanded that this committee "pass on all questions," including union recognition, but Mr. Welborn said he would not submit that question to anybody. Mr. Moran declared that the mine workers would not submit anything to the Industrial Commission. On the other hand, Mr. Welborn promised to do anything the commission might order as a result of its investigation.

Mr. Moran refused to attend the inquiry but ultimately did attend on the summons of the court. He testified that the grievances were read but not considered at the preliminary meeting on July 26 at the Oxford Hotel, Denver. He also testified that he had power to call a strike, but refused to say who gave him authority, and when asked if his authority came from J. P. White, then international president of the United Mine Workers, he "refused to answer." He also stated under oath that no referendum vote had been taken on the question of a strike.

Again departing from the report, it may be said that it was evident that the union was not behind the action of James F. Moran, and apparently the union members, few as they were, did not favor it and had to be encouraged with the promise that the company would sign up sooner or later.

The grievances are taken up in the report categorically. With regard to recognition of the union, the Industrial Com-



mission says it has nothing to do, its authority being limited to questions of wages, hours and working conditions. The commission adds that only a few employees desired recognition, that the president and secretary of District 15, who were appointed by the national (international?) organization, were from Iowa and Kansas respectively and came to Colorado for the purpose of managing the organization.

It adds, "the Commission believes that there is no excuse for making a demand for recognition during times like the present when the country is at war and needs the undivided support of its people." In regard to car pushing at Lester, Rouse, Coal Creek, Cameron, Walsen, Rockvale and at the Colorado Fuel and Iron Co. mines in general, the commission says that car pushing is paid for in the tonnage rate. Where the work is too hard, the company has the cars hauled one way and in some instances both ways.

#### ROOM-UPKEEP, CAR-PUSHING AND YARDAGE COMPLAINTS

Where the bottom heaves the company pays the miner to put the road in shape or sends a company man in to do the work. Miners are required to keep the track clean in the room in which they load coal. The commission said complaints about car pushing were promptly investigated, and "when they were justified, mules or other means of transportation were furnished."

In reply to the charge that without payment of yardage the miner had to drive crosscuts through pillars 20 to 35 ft. thick, the commission says that the allegation was not proved true. The company pays both yardage and tonnage for this work, "although by reason of different conditions the rate is not the same in all camps."

#### UNION MEN ARE NOT DISCRIMINATED AGAINST

In regard to the alleged discrimination against union men "and others who have the temerity to ask for justice," the commission declared the company "showed no discrimination against any employee by reason of his affiliation with the United Mine Workers of America or any union or other lawful organization; on the contrary the evidence showed that the company encourages its men to bring their complaints to the pitboss, superintendent, industrial representative or officers of the company."

"Sections 3925 and 3926, Revised Statutes of Colorado, 1908, provide that: It shall be unlawful for any employer to prevent any employee joining any lawful union or other organization or to coerce any employee by discharging or threatening to discharge him on account of his membership in any such organization, and provides as a penalty for the violation of the act, a fine from \$100 to \$500 or six months to one year imprisonment or both."

"W. L. Morrissey, deputy state labor commissioner, testified that his department had not received a report from any employee of the Colorado Fuel and Iron Co. or from any representative of the employees of that company, of any discrimination against members of the union or other organization. Mr. Morrissey investigated the records of his office for the past three years and reported to the commission that he failed to find any such complaint of discrimination. The union is permitted to hold meetings on the company property."

#### A FEW NECESSARY WATCHMEN ARE MAINTAINED

The commission denies that "gunmen" are employed. The company in most camps maintains a night watchman, at some the man is armed and at some unarmed. At Berwind and Tabasco, adjoining camps, the company has six men employed as watchmen, the extra men having been "put on at the request of the Italian miners after the houses of two Italians had been dynamited. The company stores cash all miners' checks and on payday one or two armed men are employed to accompany the money from the express office to the company stores."

Only one complaint against the watchmen was reported to the commission, the offense alleged being eavesdropping. The man making the complaint was told by a representative of the employees to whom he made the complaint that if charges were brought and substantiated the offending party would be removed in two days, but no charge was presented.

Though the "Moran" list of grievances—they are here so named because they seem to have been evolved from Moran's inner consciousness and not from the union or its members—declared that mine workers were coerced from presenting their grievances by threats, intimidation and more vicious methods, the commission states that "the company offers every opportunity and encouragement to its employees to present their grievances."

It suggests, however, that the employees elect an industrial representative to present their case, similar to the industrial representative of the company, David Griffiths. This official would be supplemental to the local representatives who already meet with the company's local representatives under the industrial representative plan.

#### TONNAGE RATE PAID IS NOT A BREACH OF FAITH

The Moran list of complaints declared that the change in the basic tonnage rate of Fremont County from 90c. to 80c. was a breach of faith. The company denied that this was a fact and declared, that contrary to what had been alleged, no promise had been made to pay on the 90c. basis when the mine was closed by a strike in 1914. The miners petitioned for a reopening of the mines and the company claimed that it could not operate at the higher rate of 90c. The miners declare that their representatives reported to their meeting that the company would reinstate the 90c. rate when conditions again became normal. The company claims that if reinstated the rate would permit the Fremont County miners to earn more than the miners in other counties of the state.

The Moran schedule set forth that the company had refused to check off on behalf of the Red Cross 1 per cent. from all mine workers. The company replied that the request for this check off was only made in one mine village—Sopris—and that there it was made by the president and secretary of the local union and a few other men. As no one had signed for these deductions the company did not make the collection, but recommended that the contribution be made, the wives and daughters serving as collectors for the fund.

As for the payment for cross-bars and extra timbering, the commission says that the law required this work on the part of the miner and it was paid for in and as part of the mining cost. The Starkville mine made the most complaint, but, at that mine, there were countervailing advantages in mining. The company pays for retimbering, however.

#### DO NOT LIKE COMPANY'S EXCLUSION OF OLD MEN

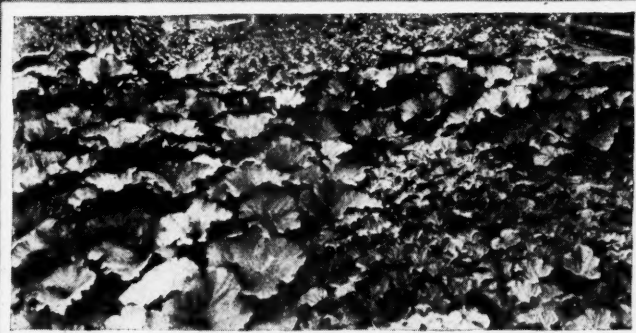
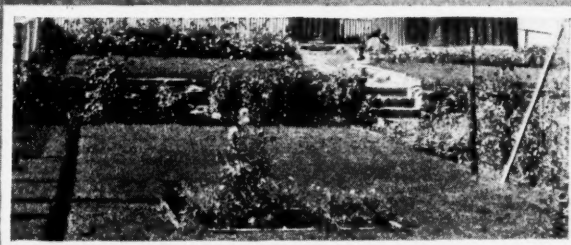
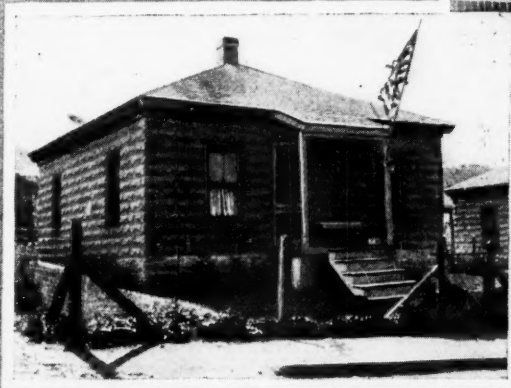
The complainants objected to the establishment of an age limit on new employees. The company will not receive men over 45 years old into its employ, because at the age of 65, men with a service record of 20 years are retired on a pension of not less than \$20 a month. The commission affirms the company's right to employ whomsoever it pleases.

The commission refused to demand a uniform rate for brushing because conditions vary. In some mines this brushing is done by company men. The complaint about the mining laws being disobeyed was not sustained. James Dalrymple, the state coal-mine inspector, testified that he inspected the mines every 90 days and some every 60 days and stated that he had received no complaints regarding the condition of the mines.

The rest of the complaints and the other decisions of the commission will be published next week.

#### Honor Roll for Davis Miners

The Davis Coal and Coke Co., which mines coal near the line between Maryland and West Virginia, in and near the northeast corner of the latter state, has started an honor roll in which is listed all miners making over \$175 a month. This roll is divided into two parts, the first-class division containing those who make over \$200 a month. In October there were 50 men less one who qualified for the honor roll first class and 94 who were in the second class. That is a wonderful record.



**SOME OF THE HOUSES AND HAPPY SURROUNDINGS OF COLORADO FUEL AND IRON CO. EMPLOYEES**

Courtesy of C. F. & I. Bulletin

On left, from top to bottom: Home of Fred Barfoot, Rouse; home of A. L. Wahlmire, Walsen; home of O. E. Anderson, Morley; garden of S. Matsushigi, Sunrise. On right, from top to bottom: home of Antonio Rossetti; home of William Preston, Pueblo; lawn and garden of W. F. Urfer, Primero; home of John Fatur, Frederick.



## Editorials

THE debate on piece work at the recent meeting of the Coal Mining Institute of America was an excellent illustration of the manner in which men will misapprehend one another and find matter for debate, when if they only understood each other they would find fifty reasons for concurrence to one for difference.

\* \* \*

Given our present systems of hand labor, surely piece work is the solution of our difficulties, so far as one can be found; but, on the other hand, given a possibility of an increase in the machine work of a mine, then there is a strong argument for the more flexible day labor, because the worker by the day will not feel his wage menaced by any changes which may be proposed and will give the new plan a fair chance of success.

\* \* \*

The worker realizes when working on a day-labor basis that the experiment is not taken at his risk. If it fails, the company loses, not he. On the other hand, the operator who is disposed to try the experiment realizes that if he makes a success he will receive the major part of the profit, and he is willing to take a chance and make the investment which the new scheme demands. He is ready to keep on trying new schemes as fast as the first modifications prove profitable to him.

\* \* \*

The men who declared at the institute meeting that the day worker would not work industriously might well have been told that given favorable conditions, involving little physical labor, men have been known to do so much work that, even since the war began, they have been haled into court, fined and forbidden to engage in their industrial pursuit any longer. These men were chauffeurs. Their work was simply to guide a machine along the streets and throw the power on and off. There was no reason for them to slacken in their work. In fact, it was so congenial that they labored too industriously at it and fell into the clutches of the law.

\* \* \*

PERHAPS plants will never be installed underground that have all the lure of a high-powered automobile. But it shows how machinery can and does remove the drudgery of labor. No jinricksha coolie or roller-chair operative would be liable to violate speed rules. Given a condition, similar to that which seems to have been set up permanently in the mines, by which the owner of the jinricksha or roller chair would have to pay an equal amount per mile to the operative whether these carriages were propelled by muscle or by power, slowly or at speed, then where would there be any disposition for the owner of such vehicles to make a change at his own charges? But with day labor the effect of

the change on the operative would not arise and the owner of the carriages would know that the power he was installing would work longer and at greater intensity than could be expected of the individual, and he would realize that the advantage justified the expenditure.

\* \* \*

No one proposes that the operator should install day labor at the ordinary mine where no new machinery or methods are to be introduced. It is only when the operator intends to revolutionize methods by introducing newfangled machinery that he should go definitely onto the day-labor plan. Unfortunately, he too often is so anxious to get to the piece-work basis that the operative is positively afraid to do his best at the day-work plan for fear of an inordinate desire on the part of the operator to use the endeavors of the day worker as a reason for the establishment of what might prove an inadequate piece-work scale.

\* \* \*

THE day worker sees piece work so closely impending that he is animated by a desire to slacken his efforts, and to be fair to him he is not altogether unjustified, for when the experiment is tried the operator or the machinery company supplies extra help to see that the wheels run smoothly; extra care is taken to see that mine cars are supplied promptly; reports are being made at short intervals to the president of the company; the needs of the rest of the mine are subordinated to that section where the new machinery is installed; it is given plenty of power; it has first draft on all available supplies; in fact, on every hand the operator is being stimulated by the day wage and he is animated always with a desire to make a good showing to his employees.

\* \* \*

But when the piece-work scale is established the operator loses interest. The machinery is not so carefully kept in repair, the experts of the manufacturing company leave, the car supply is slow, the voltage drops; the system slackens, interest ceases, reports are less frequent, supplies are not furnished promptly; the operator has no recompense any more for any help he may extend to the operative except an indirect one, a recompense that he and his immediate subordinates are somewhat slow to recognize.

\* \* \*

Of course, larger tonnage increases his profits a little and lightens the burden of overhead. Of course, mine workers who make a larger income are a little better pleased—not much perhaps—and that lightens the labor of operating. And then it is true that he can get men when other mines cannot. But this is not a sufficiently direct profit, and the operator or at least the mine foreman cannot see the importance of securing it.



For this reason, whenever a radical change in methods is adopted lightening labor considerably, good men should be chosen; they should be paid a good day wage; they should be closely supervised; every chance to get a good output should be provided, and it should be clearly understood that a basis for piece work is not sought, that a day-labor status is established as a finality, that as soon as the new plan succeeds more plans will be tried still further organizing operation and still further lightening the labor of production.

\* \* \*

When a new dump or a new locomotive is introduced no one is afraid to help it do its level best, because everyone knows that day work is permanently established in reference to dumping and hauling, and there is no need to "stall." The trouble with the locomotive drivers is not that they will not do enough. It is that they try to do too much. They are apt to pick up trips which are too large; they are prone to take risks in backing up and in coupling. Their faults are likely to be the faults of the chauffeurs rather than those of the jinricksha or roller-chair man.

\* \* \*

**M**ANY states are confronted with the demand for a minimum wage. It will probably come in Eastern states after awhile. If you have to pay a minimum wage, you may as well pay a day wage to everyone, otherwise it is "heads I win, tails you lose." A good employee makes large money and a poor one gets a man's wage anyway. In fact the minimum wage inevitably drives out piece work—everyone gets the minimum wage after a while.

\* \* \*

Where there is a minimum wage, it tends to be the only wage paid, driving to the wall both piece work and such wage scales as have been graduated to suit ability and industry. It is the piece-work system which is giving the minimum wage its great appeal. In England it was the so-called "abnormal place" and the abnormal man who couldn't or wouldn't make a living that introduced into mining the minimum wage.

\* \* \*

Because abnormal places and the abnormality of the men do not affect the earnings of day laborers, the introduction of day labor would serve, perhaps, to stave off minimum-wage legislation and at the same time enable the industry to progress. In fact, the minimum wage by compelling the introduction of a day-labor scale might force the operator into coöperation with the employee and make him realize the advantage of "mechanizing" the mines.

### New Merits in Miserliness

**S**PEAKING before "The Academy of Political Science," Basil B. Blackett, of the British Treasury, advocated a reduction in the purchase of the goods and services of others, the economy being practiced not so much for the purpose of securing money for the purchase of Liberty Bonds as with the idea of limiting the manufacture of unnecessary goods, thus saving raw material and labor for the service of the war. The metals and other materials used for the manufacture of

nonessentials and the labor expended in preparing them for market and in transporting and distributing them is what we desire to save. As was said by Dwight W. Morrow, director of the War Savings Committee for the State of New Jersey, saving is worth while even if the money saved is buried in the ground or thrown into the sea. It is well to be saving and niggardly in the purchase of goods and services even if the money thus secured is not given to the Government or invested in a worth-while industry.

It is true that we might buy without much harm all the nonessentials made up to date, provided that it did not encourage other nonessentials to be made. We might pay all manner of unreasonable figures for them without harm, provided no one was encouraged to produce more. Unfortunately, when people can sell what they make at a good figure, they are in a feverish haste to replace what they have sold. Therefore, it is well to be extremely careful in such purchases so as to reduce the unnecessary waste of goods and a needless use of services. There are so many goods and services which must be expended for the war and for the barest living and development that nothing will remain for less essential purposes. We can fill all lesser needs after the war. We should render no services, free or paid, that may be adjudged as nonessential to the direct or indirect prosecution of the war. The essential matter is not what we pay for goods or services, but how essential they are for our actual livelihood or for the operation of an essentially war-worthy enterprise.

We shall before long realize that the selling of stocks and bonds merely to obtain Liberty Loan money is not worth while, that expenditures in aid of the railroads are as useful as purchases of Liberty Bonds if expended on equipment or other means for the rapid increase of capacity, that bond issues of municipalities for improvements should only exceptionally be purchased, that for the most part hotels and stores should not be built nor should funds be collected to build permanent structures in France or in Palestine, as in contemplation. Temporary buildings are good enough for soldiers and Government employees, and they are good enough for civilians if warm, clean, safe and sanitary.

Miserliness has taken on a new merit. At worst it was not a long way from a virtue when practiced on oneself and not on others. It is alien to our natures, but for a while at least we have to submit to it or find ourselves worsted in the war.

### "They Are Waiting for Your Coal"

**T**HE reader will note on page 1082 of this issue a bulletin relative to the coal shortage entitled "They Are Waiting for Your Coal." It urges the mine worker to continue his efforts to supply the great need of the hour. Some mines, unfortunately, are now without cars and the men cannot assist in the work of replenishing the coal scuttle and the factory. Even the men in these mines do well to realize, however, the severity of the situation in manufacturing centers. It will make them ready to do their part as far as opportunity is granted them. We urge every operator to clip this bulletin and post it. Let us know if you appreciate this service. If you do, it is our purpose to extend it.

## Legal Department

### Recent Legal Decisions

BY A. L. H. STREET

Attorney at Law, Minneapolis, Minn.

**OPERATOR'S LIABILITY FOR PUNITIVE DAMAGES**—When a coal-mining company's negligence in permitting a mine roof to remain in a defective and dangerous condition is of gross or wanton character, an employee injured in consequence may be awarded punitive as well as compensatory damages. And, where such negligence exists, an employee is not to be precluded from recovering damages because he remained at work with knowledge of attending dangers. When an employing operator has notice of defective conditions through his proper representatives, omission of an injured man to give notice on his previous discovery of such conditions does not prevent his recovering damages for resulting injury. (Alabama Supreme Court, *Bradford vs. Clinton Mining Co.*, 76 Southern Reporter, 74.)

**CORRUPT PRACTICE AMONG MINE FOREMEN**—The Pennsylvania law which makes it a misdemeanor for a mine foreman to receive or solicit money, or any other valuable consideration, from any of "his" employees, for the purpose of procuring employment, is to be liberally interpreted to give effect to the legislative intent to strike down an intolerable practice, enforced by unscrupulous persons desiring to profit at the expense of those dependent on their grace for daily wages. So interpreted, the law makes it an offense for a mine foreman to receive money from a miner employed by the same coal company as the foreman, as a consideration for continuing the miner's employment, not limiting the statutory offense to dealing between a foreman and his own employees. (Commonwealth vs. Jones, 64 Pennsylvania Superior Court Reports, 385.)

**MINER'S AND OPERATOR'S DUTIES STATED**—Since mining operations naturally involve changing conditions in the miner's place of work, affecting his safety, it is ordinarily his duty to take precautions to make his working place safe, subject to the operator's duty to provide props, etc., on request. The miner must exercise a reasonable degree of diligence to keep himself advised concerning blasting operations carried on in the vicinity in which he works, but he is not bound to guard against possible negligence of his employer in rendering the place additionally insecure without reasonable warning to him. Where a miner was deformed, paralyzed and rendered helpless by an accident attributable to his employer's negligence, a verdict for \$30,000 in his favor cannot be regarded as excessive, especially where the employee was only 26 years old when injured. (Arkansas Supreme Court, *Central Coal and Coke Co. vs. Graham*, 196 Southwestern Reporter, 940.)

**OKLAHOMA MINE-SAFETY LAW**—"For the better protection of the health and lives of men engaged in the obviously dangerous work of mining coal, the people of this state, by statute both remedial and penal, have seen proper to prescribe certain regulations and conditions under which a mine may be lawfully operated, one of which conditions is that 'all working places shall be kept clear of standing gas.' The standard of duty thus defined and imposed upon the owner of a mine in all circumstances is made the criterion of his care for the safety of his employees in the operation thereof; his obligation to meet all the statutory requirements is imperative; and neglect so to do, if resulting in injury to another, will, in the absence of contributory negligence, render him pecuniarily liable." (Oklahoma Supreme Court, *McAlester-Edwards Coal Co. vs. Hoffar*, 166 Pacific Reporter, 740.)

**AGREEMENT FOR SUSPENSION OF ROYALTY PAYMENTS**—Under the following paragraph of a coal-mining lease, pay-

ment of minimum royalties was suspended during shutdowns of the mine due to inability to secure railway cars to move the mined product, but not by cessation of operations resulting from machinery troubles or poor market conditions: "It is agreed by the parties hereto that during strikes and other unavoidable casualties over which the second parties have no control, then no royalties are to become due and payable for the time the parties of the second part may close down their mines for said causes, except on coal actually mined and shipped, and the yearly minimum as provided for in paragraph three of this lease is to be reduced proportionately—that is, in proportion that the number of days which said mines are so suspended bears to the entire number of days in the entire year in which the suspension [occurs?], Sundays and holidays excepted." (Kentucky Court of Appeals, *Bennett vs. Howard*, 195 Southwestern Reporter, 116.)

**AGREEMENTS RESTRICTING COMPETITION**—Defendant, in selling an established retail coal business in Philadelphia, agreed with his successor that he would not, for a period of two years within the city, nor for a period of five years within two miles of his old location in Germantown, "become directly or indirectly engaged in or connected with any retail coal business or undertaking similar to that heretofore conducted by him, . . . either individually or as a member of any firm or partnership, or as an officer, director, manager, stockholder or employee, or any other capacity, other than in any one of said capacities" for his successor. Under this contract, it is held by the Pennsylvania Supreme Court that where defendant, three years after entering into the contract, established a new coal business in Philadelphia, although outside the two-mile radius, he was subject to be enjoined against soliciting orders for fuel within such radius within the five-year period mentioned in the contract. (Richards vs. Shipley, 101 Atlantic Reporter, 456.) The court said: "The defendant cannot be restrained from establishing a coal yard, after the term of two years, beyond the territorial limits set forth in the agreement, but the soliciting of business, the selling and delivery of coal to customers within the territorial limits, is carrying on business and a breach of the contract."

**OPERATOR'S RESPONSIBILITY CONCERNING MINE INSPECTION; EMPLOYMENT OF PHYSICIANS**—Where supporting timbers in a mine entry have been blown away, exposing lime seams the disintegration of which obviously expose the roof to fall, the mine owner owes a duty to employees engaged in work at the place to make inspections of the roof as frequently as necessary to avoid accidents. A miner must inspect and timber his own room, but has no such duty concerning the entries, although bound to exercise a reasonable degree of care for his own safety at all times and places. In an action for injury to a miner in an accident rendering him unconscious, he is entitled to reimbursement against the value of the services of a physician employed by a coemployee to attend him. (Iowa Supreme Court, *Ahlson vs. High Bridge Coal Co.*, 163 Northwestern Reporter, 219.)

**ABANDONMENT OF LEASE**—A mining lease which requires the lessee to commence operations within one year is deemed to have been abandoned where no development work has been done after a lapse of ten years. (Arkansas Supreme Court, *Mansfield Gas Co. vs. Parkhill*, 169 Southwestern Reporter, 957.)

**OWNERSHIP OF ROYALTIES**—Where the right to royalties under coal mining is in dispute between adjoining land owners, the lessee liable for the royalties is entitled to pay the same into court to abide settlement of the dispute. (Kentucky Court of Appeals, *Scott vs. Daniels*, 169 Southwestern Reporter, 830.)



## Discussion by Readers

### Women in Industry

*Letter No. 1*—I was somewhat surprised when reading the article on this subject, *Coal Age*, Nov. 24, p. 888, to note the suggestion that, in the opinion of the writer, "there is no valid reason why women could not be employed in the mines as pickers, checkweighers, dumpers, oilers, loaders and trimmers, sweepers and laborers around the shops, warehouse keepers, oilhouse keepers, explosives distributors, signalers, locomotive runners and trappers."

While some of the positions mentioned here, such as checkweighers, warehouse keepers and distributors of explosives, might be filled by women, in the stress of war times, other positions such as pickers, dumpers, oilers, loaders and trimmers, locomotive runners and trappers are not such as could be recommended to be filled by women. The work to be performed in these last-named positions is generally too arduous, dangerous and dirty to be adapted to women workers.

There is no question but large numbers of women clerks can be employed in stores, offices and warehouses to fill the places of men who have answered the call of their government. There is no doubt but this work would be performed by the majority of women gladly, as a patriotic service to their country.

Women must not, however, be made to work as slaves in positions that are not fitted to their physical condition and ability. The work of women in Great Britain, made necessary by the war, while a noble one, cannot be considered as one that must be adopted in full in this country, at the present time.

Woman's natural place is in the home, and we cannot but hope that conditions in this country will not demand her services in positions for which she is less adapted.

Rawdon, Que., Canada.

C. McMANIMAN.

### Miners and the War

*Letter No. 4*—America is at war. Whoever does not realize it should acquaint himself at once with the fact. Looking over the coal fields, we observe a goodly number of young men who have volunteered for service, while a still larger number are enrolled under the draft law. To the careful observer, it would appear that the remainder of our mining population are striving to grab all the "big money" they can get by reason of the situation.

In the present crisis, men are supposed to be asking themselves the question, "What am I doing to help win the war?" Is it not true that, in the majority of cases, the answer to this question must be "Nothing." After working many years in mines, I have never yet seen a time when miners were able to make anywhere near the amount of money that they are drawing at present, and yet many of them are dissatisfied.

Only a day or two ago, on going into a man's place whose last pay envelope contained \$100, the result of

two weeks' work, I asked him how he was making out this time. His reply was, "I want \$200 next pay." Let me ask, Is it not true that the same spirit is animating the most of us at this time?

I was much impressed by the reading of the Foreword, *Coal Age*, Nov. 24, entitled "Is This My Boy?" It was fine; but I wondered how many men, outside of a few mine officials, would read and apply the truth imparted to their own actions. But, unless this is done and we live up to that standard and pass it on to the other fellow, the time spent in reading the article will be wasted.

As mine foremen, each day, we move in and out among the men working in the mine and urge them to load all the coal they can. We warn them that the "penalty clause," which imposes a fine of \$1 a day on a man who fails to work when he is able, will be enforced. But, do we explain to them what was and is the idea of that clause?

Let us remember that no man likes to think that he is compelled to work every day or pay a forfeit. Explain to them that the Government does not want the dollar, but is in urgent need of coal to win the war. Any man who is loyal will then come to work each day with the feeling that he is doing his bit to win the greatest war the world has even known.

#### THE ARGUMENT THAT WENT HOME

A short time ago, I made it my business to ask every Italian miner in the mine what he thought of the penalty clause. With one exception, they all replied that it was "no good." Getting a number of them together, I illustrated the situation to them, by drawing two lines on the floor of the entry with a stick. I explained that one of these lines separated the Germans from the Italian armies, whom they were fighting, while back here on the other line were the numbers of Italian miners, in this country, having good work, lots of money and plenty to eat.

Continuing my story, I made it plain to them that it was every man's duty to mine all the coal he could, so as to keep the factories going and supply the guns and ammunition needed by their brothers, who were fighting and being killed at the front. I explained, further, how much coal was required by the trains and ships for transporting these supplies to the field of battle, and concluded by saying, "Yet you fellows claim that the penalty clause, which is intended to make every man do his best, is 'no good.'" Was not that far better than telling those men that they would lose a dollar if they were idle a day?

My belief is that every mine foreman exerts a great influence over his men, for good or bad. His duty in regard to the war is not confined to the purchase of Liberty bonds, which net him 4 per cent. interest on his investment. If the war is to be won, as has been said, "by coal," it is clear that there is a terrible responsi-



bility resting on the miner and all connected with the coal-mining industry.

Attention has been drawn, in *Coal Age*, to the employment of women to take the place of men called to the colors, and this has been done, in numerous instances, by the railroads throughout the country. In my opinion, it is a highly commendable move, for there are, in all industries, many kinds of work that can be performed equally well by loyal women.

England has trained and equipped an army of 5,000,000 men out of a population of 45,000,000 and employs over 1,000,000 women in positions formerly occupied by men. At present, in our own great land, with a population of more than 100,000,000, we are sending 1,000,000 men to the front, and should we regard this as a drain on our ample resources?

Let me suggest in closing that if all mine officials and miners who read these articles in *Coal Age* would endeavor to prove by their actions that they are in earnest, and try to pass the same feeling on to the other fellow, the work of *Coal Age* will not be in vain. If the war *must be won with coal*, it is high time that mining men of all classes realized that fact. We will then know where we stand. It is no time for strikes and lockouts, but every man must put his shoulder to the wheel, remembering *it is the miner who stands behind the gun*.

Heilwood, Penn.

THOMAS HOGARTH.

## Justice in the Increase of Wages

*Letter No. 1*—The Fuel Administrator's recent granting of a wage increase to coal miners works an injustice that is keenly felt as being unfair to the salaried men employed in the same industry. It is a fact to which attention should be drawn, if for no other reason than that of extending equal justice to a comparatively small class of salaried employees who are overworked by reason of the same conditions that have forced the granting of the increase in pay to miners.

By the salaried men employed by coal companies, I refer to superintendents, engineers, electricians, mine foremen, assistant foremen, firebosses, office clerks and timekeepers. These men are mostly paid monthly salaries, ranging from \$75 or \$80 to \$250 per month.

### INJUSTICE TO SALARIED EMPLOYEES

The salaried force of a mine putting out a comparatively small tonnage of coal is composed, quite generally, of either college-trained or self-made men who have spent years of labor and study in securing a costly education that has made their experience and ability valuable to the company that employs them. Compared with the average miner, workers of this class are receiving a less rate of compensation for their services, while the miner, with no training other than that gained in the pursuit of his daily toil, is continually in receipt of advances in his wages, by reason of the fact that he belongs to a labor organization and is willing to strike if his demands do not receive attention.

A boy of 16 can go into the mine and, in a few short years, be earning from \$6 to \$8 and \$10 a day, working only 8 hours digging and loading coal. His time outside of the mine is his own, which he can devote to any purpose he desires, while the time of the salaried man belongs wholly to his employer. From 6 o'clock in the

morning until he reaches his bed at night, the salaried man is subject to the demands of the office and the mine.

It may be true, in a few instances, that the salaried employees of coal companies have been given a slight raise, supposed to be equal to that of the advance in wages accorded the miner. It cannot be denied, however, that there is a great disparity between the amount of money a good miner can earn and the salary paid to the man who is officially his superior. To say the least, it is embarrassing when necessary instructions and orders must be given to a man who makes twice as much money as his boss, in less time, and incurs less responsibility for his work.

### HOW INCREASED WAGES ARE SPENT

There is, besides, another phase of the subject that is of interest. As a class, salaried men, by education and training, move in a different society, are subject to greater expenses, and seldom squander their money in the manner that is so frequently observed among miners drawing "big pay," of which their wives delight to boast and which they are anxious to display in many ways.

As an instance, allow me to cite the case of my washerwoman, who, last week, told me proudly that her husband made \$147.50 in 10 days, digging coal, but added, "We just never have nothing though." Knowing they had but one child, I failed to understand her statement that they "had nothing," until I saw her husband, only last night, spend \$5 in an endeavor to win a diamond ring on a "punch board." He then purchased an entire bunch of bananas and treated the boys. Another miner spent \$27 on the punch board the same night; yet the expenditures of these two men excited no comment, being nothing unusual in this district where the miners make good money, earning from \$6 to \$15 a day. Their motto seems to be, "Come easy, go easy."

### CONSERVATION VS. EXTRAVAGANCE OF MINERS

Without mentioning other instances of unwise expenditures and the extravagance of miners' wives, let me say that the call for conservation, not only of food but of all living necessities, does not appear to be supported in this act of the Fuel Administrator in granting the increased wages demanded by the miners when the money thus given to them is spent, for the most part, in more extravagant ways of living.

Observation proves that the majority of salaried employees can be depended upon to act in the best interests of their employers. These men are not organized for the purpose of demanding their rights and increase of pay, but are loyally striving to do their utmost in the hour of their country's greatest need. Simple justice would demand some recognition of their loyalty to the cause at the hands of the Government.

Everyone, I am sure, will agree with Mr. Garfield in his contention that the conditions under which we are living at present are unusual, and that miners' wages are freely acknowledged to be abnormally high. Yet, let me ask, Why should not the payments made to salaried men receive the same attention, to the end that justice might be done to all and no unfairness shown? Is not the arm of the Government sufficiently strong to resist an unjust demand on the part of laborers in any branch of its industries?

In closing, it is but right to say that the miners, as a class, are favored in many ways that do not reach the salaried employees of large companies. The compensation laws of most coal-mining states provide that if a man is hurt he must not only receive the best attention by a competent physician, at the expense of the company, but must also be compensated for the time lost from work. The law requires that, in case of a fatal accident, the man's wife and family be amply provided for.

Indeed, at the present time, the condition of the coal miner is not a downtrodden one, as is often made to appear. But, if the man is not shiftless, careless and indifferent, he is able to attain to a more comfortable mode of living than the average salaried man employed by the same company. This is a matter that should receive careful attention and recognition, in the name of justice to loyal workers.

. EQUITY.

—, W. Va.

## Men in Blind Alleys

*Letter No. 1*—I have often seen and talked with men much older than myself who, in my humble opinion, were well fitted to hold higher and more responsible positions than those they were filling at the time.

Inquiry as to the reason why they did not aspire to a higher position than the one held elicited such replies as, "I would not be bothered," or "There is too much red tape attached to that job"; or the man in question admitted that he had not the "pull."

In many of these cases, the company was well satisfied to hold these men in the positions they occupied, believing that they were better fitted for the work in their charge and knowing that a change would necessitate their breaking in a new man who might not give the same satisfaction.

To say that a man in such a position is in a "blind alley," expresses the situation better than can be described in any other words. For example, take the mine foreman or fireboss who is chained to his particular duties in such a manner that he has come to feel that he is not fitted for doing anything else. Is it any wonder that, in time, such an one loses confidence in his own ability, and shows no initiative that would recommend him for anything higher? He may even come to that point where he feels he must submit his plans, in regard to some simple operation, to the superintendent for his approval, before putting them into execution.

### THE MAN WHO "EATS HUMBLE PIE"

When a man, in this manner, is compelled to "eat humble pie," as the saying goes, his employer need not be surprised if he quits his place for a job where he will receive greater encouragement and where the company is more progressive and every worker shows an ambition to develop the best that is in him.

Such will be the result if the man is worth while. He will not submit to working, for any length of time, in a blind alley. The company that does not realize this will lose many of its best men, for no other reason than that the men were not given an opportunity to rise and develop their capacities for getting results.

Reference is made, in the Foreword, to the principle that, it is claimed, controls every business; namely, "The

survival of the fittest." Let me say that this does not always apply in the case of a single operation. I have known men who were well fitted to fill different positions within their reach, but who have been sidestepped to allow some relative or friend of the superintendent or manager to take the place. It may be a brother in the lodge, or a member of the same church or other society to which the manager belongs, and who is favored for no other reason, as the results soon show.

### MOVE YOUR MEN OUT OF "BLIND ALLEYS"

The man thus left in a blind alley is quickly disheartened. It is galling to him to receive his orders from one who is inferior to himself, in respect to his practical ability, as is frequently shown by the orders the newly appointed official gives for the performance of work.

The advice given at the close of the Foreword of Nov. 10 urges every employer to move his men out of these "blind alleys," which is sound advice. Get the best out of your men that there is in them. When a man does not come up to expectations it is evident that he is not fitted for the work in his charge. Either put him in another place where he can perform his work with satisfaction or turn him loose and get somebody else in his place. Never permit friendship to override justice, but give the job to the man who can get results.

Clinton, Ind.

TIMOTHY GOLDON.

## Examination of a Mine

*Letter No. 1*—Having been a fireboss for a number of years, I would like to explain, in detail, the manner in which a fireboss should perform his duties. The answer given in *Coal Age*, Dec. 1, p. 947, while replying to the question asked, does not give in detail the many things to which a fireboss should give attention from the time he reaches the mine in the morning until he goes home in the afternoon.

The first duty of the fireboss on arriving at the mine is to examine his lamp closely to see that it is in good working order. After lighting his lamp, he should proceed to see that the fan is running at its regular speed and that the hoisting engineer is at his post.

### THE FIREBOSS ENTERS THE MINE

Having signed the bulletin board and turning it to mark "Danger," he descends the shaft. On reaching the shaft bottom, he takes notice of the volume of air passing and observes the division doors between the main intake and return airways to see that they are in good order and closed.

Starting on the examination of the mine, the fireboss travels the intake airway, examining the condition of the roof and timbers as he goes, and making note of any repairs or other work that may be needed along the road. He must examine all doors that he passes on his way into the mine, to see that they are in good condition and closed.

Traveling thus with the air current, and having arrived at the first working place, he must examine the roof carefully, sounding it to see that it is safe. In the same manner he must examine the coal face and make a careful test for gas. He must ascertain that the place is free from any accumulation of marsh gas or black-



damp and has a sufficient supply of timber on hand. Having done this, he marks the date and his initials on the face of the coal. In the same manner, he must examine each working place in order, until he has completed the examination of all the places in his district.

Should the fireboss find any working place in a dangerous condition, he must fence off all entrances to the place, putting a suitable danger signal at each entrance. Should he discover gas in small quantity, he must endeavor to remove it by extending the brattice so that the air current will sweep away the gas. Should there be a considerable body of the gas lodged in a place, the fireboss must bar the entrances to this and all other places on the outby of the current, so as to prevent men from entering that portion of the workings.

#### REPORTING THE EXAMINATION

Having completed his rounds, the fireboss returns to the surface, again signs the bulletin board and turns it to indicate that everything is safe for work. He then proceeds to the mine foreman's office to make his report, which he enters in the book kept for that purpose. In this report, he must describe and locate whatever dangers he may have found in the mine. He should consult freely with the mine foreman in respect to the condition of the mine.

When the fireboss has had his breakfast, he returns to the mine and makes a more careful examination of the air-courses and working places in his district, giving such instructions to the men as may be needed. This will complete his duties for the day. Twice each month he should measure the air at the intake and at the last breakthrough in his district, to know that the usual amount is in circulation.

W. DICKINSON.

Oak Hill, W. Va.

### Working Pittsburgh No. 8 Coal

*Letter No. 11*—Kindly allow me to submit my plan of working the Pittsburgh No. 8 coal, referred to by E. O. Carney, in his inquiry, *Coal Age*, Sept. 22, p. 509. This plan is similar to that submitted by "Mine Foreman," Oct. 20, p. 689, which, with few modifications in respect to width of openings and pillars, I believe will give the highest percentage of coal extraction.

As shown in the accompanying figure, I would drive four main entries in the center of the field and develop the mine to the right and left of these main headings. All headings should be driven 10 ft. wide and the pillars between the main headings should not be less than 60 ft. wide while those on the cross-headings are 50 ft. in width.

The cross-headings are driven to the right and left of the main headings at distances of 1300 ft. apart. Butt headings are then driven off the cross-entries, 300 ft. apart, and rooms turned off these butts, on 40-ft. centers. The rooms are opened 9 ft. wide and driven narrow a distance of 10 ft. where they are widened out to 18 ft., which makes the room pillars 22 ft. wide. All rooms are driven a distance of 250 ft., leaving a 50-ft. barrier pillar to protect the next pair of butt entries.

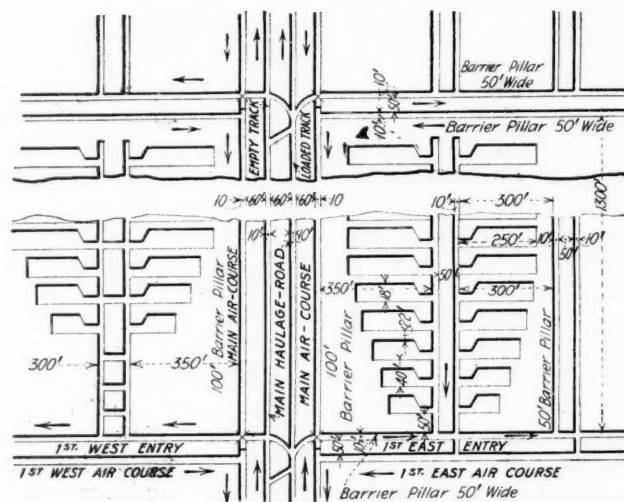
The first pair of butt entries must be started 350 ft. from the main heading, which provides for a barrier pillar 100 ft. in width for the protection of the main

headings. The cross-headings, or flats, are likewise protected by barrier pillars 50 ft. in width. These entries being driven 1300 ft. apart provides for the driving of 30 rooms on 40-ft. centers off each pair of butts.

#### MINE WORKED ON THE RETREATING PLAN

In the development of the mine, the cross-entries are driven to within 250 ft. of the property line, where the first pair of butt headings are turned and rooms driven to the line. The entire work is carried out on the retreating plan. The first rooms are started at the head of the butt entries. As quickly as a room is driven up to the line, the work of drawing back the room pillars is commenced. The butt pillars and stumps are withdrawn as quickly as rooms are finished; and, as each pair of butt headings is worked out, the pillars and stumps are drawn back on the cross-entries. While this work is being performed in the butt entries next to the property line, another pair of butts is started and, in this way, 30 men are kept at work in each pair of flats.

The coal should be mined by shortwall-mining machines, having a 6-ft. cutterbar. When a room has reached the limit, the work of drawing back the pillar



PROPOSED PLAN OF WORKING

is started at once, by cutting through the 22-ft. pillar a width of 18 ft. Three of these 18-ft. cuts are first made with the machine, 10 ft. apart.

After making the third cut through the pillar, in this manner, the work of cutting out the 10-ft. stumps is started, by making three cuts with the machine, in the first stump inby. The 4 ft. of coal thus left affords ample protection for the machine when making the last cut and must then be removed with the pick. Each of the stumps is removed, in this manner, in turn. The same process is repeated until the entire pillar is drawn back to the entry.

Where this system is followed closely, little or no trouble is experienced with heaving bottoms or falling roofs, and 75 per cent. of the pillar coal is readily extracted.

JOHN BOHN,

Snow Shoe, Penn.

Mine Foreman.

[This letter will close the discussion of "Working Pittsburgh No. 8 Coal."—Editor.]



## Qualified Mine Foremen

*Letter No. 14*—I have been following with some interest the many letters in regard to the qualifications of mine foremen. In a few instances the writers have claimed that many certified men are not competent to take charge of mines. While this may be true in certain cases, I want to say that the fault lies with the examining boards that granted them their certificates.

In my opinion the present system of examining boards in Illinois will compare favorably with any in the country. This is not to say, however, that there is no room for improvement. However perfect a system may be, there is always room for improvement as time goes on and conditions suggest changes for the better.

### BOARD MEMBERS SHOULD HOLD CERTIFICATES

In the first place, it is my belief that all members of examining boards should be men who hold certificates of competency received in previous examinations. They should have a practical mining experience of at least 20 years and be possessed of a full knowledge of the theory and principles of mining coal. The president of the board, in particular, should be a man who is thoroughly familiar with every branch of the industry and holds a state mine inspector's certificate, besides mine foreman and fireboss certificates of competency.

One important point, in relation to examining boards, is that the appointment of the members of the board should be entirely free from political influence. My opinion is that the president of the board should be appointed by the National Government for a life term, which would place him outside of politics and make him independent in the control of the work performed by the board. Under the present system, a change of administration in the state and the election of a new governor means a change in the personnel of the examining board, and this cannot but prove a step backward.

### SELECTION OF QUALIFIED MEN AS FOREMEN

It is a fact worthy of serious consideration that the coal industry is surrounded with so many difficulties that, for the sake of safety in the operation of the mines, the work of inspection, which is largely affected by examining boards, should not be hampered by a change of management. The first principle of safety demands that a competent certified mine foreman should be placed in charge of every mine.

One essential requirement of candidates for the position of mine foreman should be a practical underground experience of at least 14 years. Candidates should be required to produce reliable evidence of the length and character of their previous service in mines. In the examination, they should be required to show that they are familiar with mining in all its branches and have a technical knowledge of mine ventilation, methods of working, sinking shafts and slopes, hoisting, haulage, installation of electrical appliances and equipment, mine surveying, mine gases, first-aid and rescue work, and are thoroughly familiar with the mining laws of the state.

The man that passes such an examination is, in my opinion, fitted to take charge of a mine, and only such

a man would I consider as qualified to hold a foreman's position. To my mind, anyone who is willing to place an uncertified man in charge of a mine takes a narrow view of the responsibilities of the position, and his choice will eventually show his lack of judgment in the matter.

J. M. RODDY.

Springfield, Ill.

*Letter No. 15*—I am much in favor of requiring certificates of competency for mine foremen. The man who holds a certificate can generally be taken as a man who has qualified for the position and is capable of managing a mine in accordance with the requirements of the state mining law.

The fact that a man has passed the examination required by law, in order to secure a certificate, shows that he is not only familiar with the mining law of the state, but that he has a good knowledge of practical mining and understands the principles and theory of mining in its different branches.

However, I am going to say, plainly, that there are many men working in the mine who have no certificates, but who are, in my humble opinion, more capable of managing a mine than some men whom I have met who hold certificates of competency granted by an examining board. For this reason, I have learned that the certificate is not a true index of a man's capability.

### MANY QUALIFIED MEN DIGGING COAL

Because a man is digging coal is no sign that he is incapable of taking care of a mine. Although I hold four mining certificates granted in this state, I have always found that I can learn much from the men in my charge. It has always been my custom to give a man under me every chance to show his ability. There is much to be learned from another's experience, though he may not be a man who holds a certificate.

While I believe that a man in the position of mine foreman should have a common-school education, know how to read and write, and be able to perform the simple processes of arithmetic, I do not think it is necessary for him to be able to handle the many formulas given in textbooks and much less memorize them. If he has a high-school education, it will be of great assistance to him, no doubt, in gaining an advanced position.

In coal mining, however, it is necessary to study how to produce a good output of coal at a small cost, with safety to the men employed. A foreman needs to study the nature of the men in his charge so that he will be able to handle them successfully. He must know how to use all material and supplies to the best advantage. His knowledge of the theory of mining should include ventilation and gases, mine drainage, haulage systems and methods of working, which are of the greatest importance to the success of a foreman.

JOHN BUGGY,  
Mine Foreman.

Chambersville, Penn.

One thing that the discussion department of *Coal Age* has accomplished that is of great benefit to all its readers and to the coal-mining industry, at large, has been the bringing forward of the practical ideas of many of the humblest workers in the mine, who have been encouraged to present their thoughts, which are then prepared for publication. Thoughts are most needed.

## Inquiries of General Interest

### Setting Timber on a Pitch

There is a question that I would like to see answered and discussed in *Coal Age*, setting forth the opinions of mine foremen and practical timbermen and giving their experience in the setting of post timber, on a fairly steep pitch in a mine. The question I propose is the following:

Assume, for instance, that the place where the timber is to be set pitches at a considerable angle, say 20 or 25 deg. and the roof and bottom of the seam are hard and smooth. The coal is hard and must be blasted. I would like to ask how must the timber in this place be set so as to prevent its being knocked out or discharged when a shot is fired at the face, at the head of the pitch? Also, what kind of timber is it preferable to use, in this case? The opinions of *Coal Age* and its readers will be greatly appreciated.

Crawford, Tenn.

W. D. HALE.

Post timbers, on a pitch, should be set to incline slightly up the pitch from the normal. Referring to the accompanying figure, the line *ad* is the gravity line representing the weight of the overburden. The line *ac*, drawn perpendicular to the seam, represents the normal pressure due to this weight, while the line *ab*, drawn parallel to the seam, represents the tendency of the roof to slip downward along the plane of stratification of the measures.

The line *xo* is a level line, and the angle *xoy*, which the seam makes with the horizontal, is called the "pitch angle." This angle is equal to the angle *cad*.

As is well known, in a level seam, the pressure of the overburden is vertical or normal to the seam; and the timbers resisting this pressure must be set plumb to be in line with the pressure. In an incline seam, however, post timber must be set to resist both the normal pressure and the tendency of the roof to slide downward. On this account, the post must be of such length that when wedged at the roof it will incline slightly up the pitch from the normal.

The foot of the post is first inserted in a shallow hole cut in the floor of the seam. Having done this, the head of the timber is then raised toward the roof and a wedge inserted at that point as shown in the figure. This enables the post to be driven tightly to its place.

Being inclined slightly up the pitch, any movement of the roof downward tends to tighten the post. On

the other hand, if the post was set normal in the seam the slipping of the roof downward would loosen the post and it would fall out.

There is another point to be considered in this case, however, because of the hardness of the roof and floor. In setting timber under these conditions, in a flat seam, it is customary to taper the post, or to set it on a mound of slack or dirt, which will yield and prevent the post being broken when it takes the pressure due to the settlement of the roof following the extraction of the coal. Sometimes, reliance is placed in a soft thick cap, which is compressed when the post takes the pressure.

The same principle must be observed in the setting of post timber in an inclined seam where the roof and floor are both very hard. Here, however, it is better to rely on the compression of a thick cap of fairly soft wood than to use a mound of dirt. Or, the foot of the post can be tapered somewhat to permit it to burr and yield under the pressure of the overburden. Either of these methods for preventing the breaking of the post by a strong roof pressure is preferable to setting the post on slack or dirt placed in the foothold, on an incline.

Posts of oak or other hard timber are usually preferred on slopes where the timber must have a longer life than in rooms or butt headings. In the latter places softer woods are generally preferred, such as pine, hemlock, spruce, etc. Where the roof is hard, as in this case, it will not be necessary to set timbers so close to the face that there will be danger of their being discharged when shots are fired at the face. We shall be glad to have this question discussed by practical timbermen and others who have had experience in pitching seams.

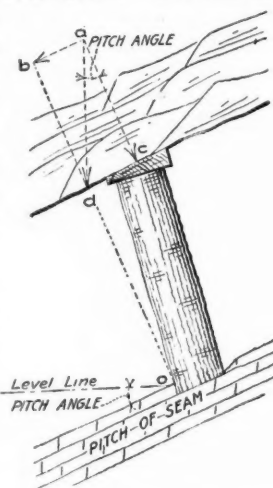
### Effect of Mine Resistance on Speed of Ventilating Fan

At a recent meeting of assistant mine foremen and firebosses, here, the following question was submitted for discussion and aroused much interest as the opinions of those present were about equally divided. Assuming a fan connected with a mine is running at a certain speed, under a given pressure of steam, will its speed be increased or decreased when disconnected from the mine, the steam pressure remaining unchanged. The question is submitted to *Coal Age*.

Farmington, W. Va.

H. A. FEATHERS.

The cutting out of the mine resistance against which a fan is operating causes a larger quantity of air to flow through the fan; and, as the frictional resistance within the fan increases as the square of the quantity, there is a greater amount of work absorbed within the fan and lost. The result is less power is available for turning the fan, which will run a little slower under the same steam pressure.





## Examination Questions

### British Columbia Examination, First-Class, Nov. 13, 1917

(Selected Questions)

**Ques.**—Name the gases expressed by the symbols  $C_2H_4$  and  $C_2H_6$ , and state with what mine gases may these gases combine.

**Ans.**—Olefiant gas, sometimes called "ethene" or "ethylene," is expressed by the symbol  $C_2H_4$ . The symbol  $C_2H_6$  is used to express another hydrocarbon gas called "ethane." The question probably intends to ask with what mine gases are these two gases generally associated. In their occurrence in the mine, they are associated with light carbureted hydrogen or methane ( $CH_4$ ). They do not combine directly with any of the mine gases, except it may be the oxygen of the air, with which they form carbon dioxide and water.

**Ques.**—In a return airway, the quantity passing is 135,000 cu.ft. per min. This air contains 3.7 per cent. of marsh gas, barometer, 30.3 in. How many cubic feet of gas is given off in the mine; and, supposing the quantity of air to be increased to 100,000 cu.ft. per min., what would then be the percentage of marsh gas in the air?

**Ans.**—The height of the barometer stated in this question does not enter the solution. The quantity of gas given off in the mine is  $0.037 \times 135,000 = 4995$  cu.ft. per min. If the quantity of air is now reduced to 100,000 cu.ft. per min., the total quantity of air and gas, passing in the return airway, will be 104,995 cu.ft. per min. The percentage of gas in this current is  $(4995 \div 100) \div 104,995 = 4.75$  per cent.

**Ques.**—What are the principal causes of explosions in coal mines, and what precautions and preventive measures should be taken to prevent them?

**Ans.**—Explosions in mines are chiefly caused by the ignition of gas or dust. In gaseous mines, this may occur by the careless use of open lamps or defective safety lamps; or the improper use of good safety lamps in the presence of gas; or by the sparking of electric wires or brushes, the blowing of fuses, or from the improper installation of electrical equipment. Gas or dust may be ignited by the flame of a blast, especially where the hole is overcharged, or the shot is improperly laid and a blownout or windy shot occurs.

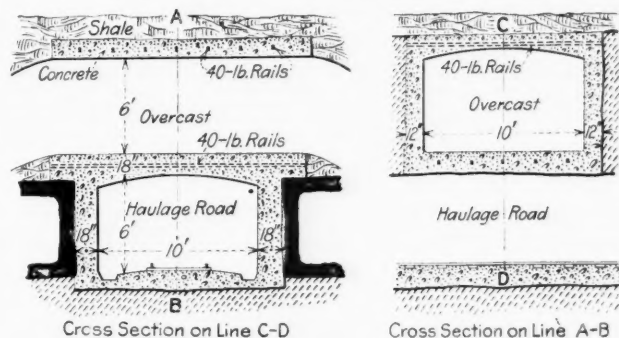
The measures to be taken to prevent these occurrences are the following: Maintain an ample ventilating current and conduct it so as to sweep away any gas that would otherwise accumulate at the working face, or in cavities in the roof or other void places. Inspect the mine thoroughly at frequent intervals. Make and enforce strict regulations in regard to the blasting of coal and rock. All shots should be fired by shotfirers employed to inspect, charge and fire all shots after the men have left the mine.

Electrical equipment should be installed by a competent electrician. In a dusty mine, every precaution

should be taken to avoid accumulations of dust on the roads and in the working places. Where blasting is performed, an efficient sprinkling system should be installed to sprinkle the roadways, at regular intervals, and the working places before shots are fired. Where the coal is mined by machines, the mining dirt or "bug dust" must be loaded out and not permitted to accumulate at the face.

**Ques.**—Describe with sketches what you consider to be a good air-crossing. What material would you consider it best to use in its construction, having in view the desirability of rendering it proof against explosions?

**Ans.**—The accompanying figure shows the method of construction of a substantial overcast spanning a haul-



CONSTRUCTION OF A CONCRETE AIR BRIDGE

age road. As indicated in the figure, the entire construction consists of reinforced concrete. The floor of the air bridge is a concrete arch 18 in. thick at the crown and reinforced with 40-lb. rails. As shown in the cross-section on the right of the figure, the roof of the overcast is also a concrete arch reinforced with the same weight of T-iron. Although it is practically impossible to build an air bridge that is proof against destruction by a mine explosion, the form of construction here suggested most nearly meets these requirements. Overcasts are sometimes made by driving a separate airway in the roof strata, but it is doubtful if this plan is of any advantage in the end.

**Ques.**—Are ventilating doors absolutely necessary to efficient ventilation, and is there any advantage in reducing the number of doors in a mine? How would you accomplish the reduction?

**Ans.**—Ventilating doors are only necessary where the development of cross-entries is not sufficient to warrant the expense of building overcasts or air bridges. In order to ventilate a pair of cross-entries turned off the main headings, without the use of doors to deflect the air, it is necessary to build an air bridge, by which the intake or the return air current circulating in the cross-entries can be carried over or under the main airway or haulage road. This leaves the haulage road unobstructed by any door at that point. Reducing the number of doors avoids delay and possible accident in haulage and eliminates expense of trapping and repairs.

# Coal and Coke News

## For the Busy Reader

No discontinuance of smokeless coal shipments to Chicago are being considered, Dr. Garfield announced on being informed that a report to that effect became current in the Windy City.

Coal on barges at Pittsburgh, awaiting a sufficiently high stage of the river to allow movement, has been ordered unloaded by Dr. Garfield and made available for distribution in Pittsburgh.

Fuel Administrator Garfield has telegraphed Governor Cox, of Ohio, who has been confiscating coal to relieve distress in the cities of that state, to "keep hands off." The coal situation, said Dr. Garfield, will be taken care of by the Federal authorities.

A statement given out by the National Coal Association says that the nation is without sufficient coal at any point and declares that the only possible relief for the shortage is an order by the Government directing railroads to supply a large number of cars to the mines.

The big event of the week in the fuel conservation campaign was the order putting in effect two "lightless" nights each week. The plan was put into operation by prohibiting power companies from selling electricity for display lighting on Thursday and Sunday nights of each week.

Mines in the Kanawha and New River fields in West Virginia have resumed operation after several days' shutdown, caused by the suspension of the Virginian Power Co.'s plant. Members of the engineer corps of the army assisted in securing a water-supply sufficient to permit of the operation of the plant.

C. R. Moriarity, of Cleveland, has been made a representative of the Fuel Administration to exercise such powers as may be necessary to discharge efficiently the duties of general director of the Coal Shippers' Terminal Pool Association. It is provided, however, that Mr. Moriarity is to work under the direction of the fuel administrators of Ohio and Michigan.

Constituting a record for any November, shipments of anthracite coal last month amounted to 6,545,313 tons. This is an increase of 552,316 tons, compared with November, 1916. Shipments for the first eleven months of the calendar year, as reported by the Anthracite Bureau of Information, aggregated 71,434,360 tons, against 61,793,617 tons for the same time last year.

During November there were shipped through the Sault Ste. Marie Canals 332,210 tons of anthracite coal as compared with 188,070 tons in November of last year, and 1,885,586 tons of bituminous coal as compared with 1,021,060 tons in the corresponding month of 1916. For the eight months ending November there were 2,510,458 tons of anthracite and 15,240,969 tons of bituminous coal shipped through the canals as compared with 2,076,901 tons of anthracite and 13,508,955 tons of bituminous coal in the corresponding time of last year.

## PENNSYLVANIA

### Anthracite

**Catasauqua**—One of the stacks of the Crane Iron Works has been banked for lack of coke and will remain idle until conditions in the coke market warrant resumption. The plant of the Thomas Iron Co. is also affected by the shortage of fuel.

**Hazleton**—Stripping contractors of the Lehigh region have under consideration a proposal to send their entire plants to France, where steam shovels, locomotives, car shops, boilers and horses are required.

Charles Kehoe has received a contract from the Lehigh Valley Coal Co. to take out the coal from the Jeanesville strip-

ping and send it to the breaker. The Lehigh Valley had undertaken to do this work itself. It will require about two years to take out all the coal.

**Shenandoah**—For the purpose of stimulating an increase in coal production for the period of the war and to relieve the great scarcity of fuel, the Lehigh Valley Coal Co. officials and employees held the first of a series of "get-together" meetings on Dec. 13. All the officials of the Schuylkill and Mahoning region, including Thomas Thomas, general mining superintendent, of Wilkes-Barre, spoke of the extraordinary urgent need for coal and appealed to the men to put forth every effort to obtain an increase in the output of the mines. Resolutions were adopted and forwarded to Dr. Garfield, fuel administrator, pledging support of employees of the company to "maintain and wherever possible to increase the output of coal."

**Pottsville**—Work was resumed on all the railroads on Dec. 15, and 90 per cent. of the collieries were in operation after the tie-up caused by the big snow storm on Dec. 13. There was a scarcity of cars at nearly all coal breakers, and when work was stopped on Saturday night most of the breakers were blocked with coal. The railroad officials gave orders for work all night on the railroads, as well as for Sunday, and strenuous efforts were made to prevent any of the collieries from closing.

**Pottsville**—The Mt. Hope Coal Co., with a fully equipped colliery and breakers, was recently forced out of business and sold its breaker to a Lebanon junk dealer. The tract which the company operates at St. Clair has been worked out of coal and the Philadelphia & Reading Coal and Iron Co., which owns adjoining tracts, which could be mined, refused to lease.

**Wilkes-Barre**—A movement, headed by the large coal operators, is under way in Luzerne County, to bring about the closing of all saloons at 10 o'clock each night as a means of keeping up the efficiency of the mine workers. It is claimed by mine officials that late hours and intemperance impair the efficiency of a small number of men at each colliery each day and that decreased efficiency is most noticeable after paydays. All the big coal companies are behind the movement to have the judges order an early closing, claiming that with the present shortage of labor every mine worker must maintain his maximum efficiency.

Elizabeth C. Alexander, who won an action against the Wilkes-Barre Anthracite Coal Co. which was fought through the lower courts to the highest tribunals of the state, on Dec. 15 showed her patriotism by refusing to ask enforcement of the court order she won. The company owns a large breaker and washery and was operating the washery from 7 o'clock in the morning until 10 o'clock at night. Because of the noise caused by the washery, Mrs. Alexander obtained an injunction which restrained the company from operating after 7 o'clock at night.

**Luzerne**—Fire of mysterious origin on Dec. 13 destroyed the headhouse and main breaker of the Raub Coal Co. colliery, causing thousands of dollars damages. As a result of the fire operations must be suspended completely at the colliery, which employed about 500 men and boys. The output was about 20,000 tons a month. A rigid investigation is being made to determine the origin of the fire. No light or electric wires were in that section of the breaker, and the officials of the Raub Coal Co. are at a loss to account for its origin at such an early hour in the morning. It is suspected that the fire was caused by those desiring to lessen the coal production in the present crisis.

**Honesdale**—A decision handed down by the Wayne County court, rules that the old gravity roadbed is the property of the owners of farms it crosses. The case came before the court in the way of injunction proceedings in which a coal corporation was restrained from removing the culm from the old roadbed. Thousands of dollars' worth of culm and coal is involved.

**Fernwood**—At the mines of the Hillside Coal and Iron Co. over half of the men agreed to work on Sundays, and quite a number did work on Dec. 9 and 16; but the storms on both days upset their plans, affecting a great number of men, and the collieries were tied up for want of empty mine cars. The wind blew such a gale that a few of the smaller buildings on a peak of the hill were blown down.

**Shamokin**—Fire, attributed to incendiaryism, early on Dec. 12 destroyed the Susquehanna Collieries Co.'s Hickory Swamp washery, entailing a loss of over \$10,000. The operation was being remodeled. To expedite shipments of coal, machinists, painters, carpenters and other skilled mechanics were pressed into service here on Dec. 15 by local railroad officials to assist in opening snowbound switches leading from collieries to the main-line tracks. At the collieries hoisting engineers, miners, clerks and other classes of labor opened the colliery tail tracks stretching out to the railroads.

### Bituminous

**Portage**—Two thousand miners and 12 mines in this district were idle on Dec. 13, as a result of a fire, early in the morning, which destroyed the New York tower of the Pennsylvania R.R. The origin of the fire is unknown. Traffic on the Portage branch of the railroad was delayed several hours, all the signals having been destroyed. The mines were able to resume operations the next day.

**Connellsville**—Owing to a dearth of cars, coal and coke plants in this field are working on a two- and three-day-a-week schedule. The situation is more serious now than at any other time since the beginning of the war. Many operators are mining coal and banking it along the tracks near a siding in the expectation that a forthcoming supply of cars will enable them to make the shipments to fill previously closed contracts.

## WEST VIRGINIA

**Bluefield**—Seventeen miners are known to have been killed in an explosion that occurred on Dec. 15 at the mine of the Yokum-Pocahontas Coal Co., at Susanna, 20 miles west of here, in McDowell County. An inspection will be made of the mine before men are allowed to resume their work. It has been said that the cause of the explosion was due to the fact that the mine had been idle for three days and gas had been allowed to accumulate.

**Huntington**—News of the partial destruction of the third coal mining town to be visited by a disastrous fire was received here by the Deegans-Eagle Coal Co., in a telegram stating that the general store, theater, hotel and offices of the company at Accoville, on Buffalo Creek, in Logan County, had been destroyed by fire. The loss, officials of the company estimated, is close to \$50,000. The origin of the fire has not been determined.

**Holden**—Fire, believed to have been of incendiary origin, recently destroyed the company store of the Island Creek Coal Co. here with a loss estimated at \$150,000. Persons who were first on the scene declare that fire burst from the store in several different parts at the same time. The store was one of the largest in the Guyan Valley coal fields, and the building together with a large stock was totally destroyed.

**Elm Grove**—Shortage of railroad cars to transport coal has seriously interfered with the mining of coal at mine No. 3 of the Elm Grove Coal Mining Co. The average output of this mine is about ten cars per day, and some days only two or three cars were available. About 125 men are employed in and about the mine, and it is a hard job to keep them at work, for if they are laid off, work is so plentiful they will quit.

## VIRGINIA

**Pocahontas**—The Pocahontas-Bluestone Coal Co. is loading coal in box cars on account of the shortage of regular coal cars.

**Graham**—The plant of the Garland-Pocahontas Coal Co., at Dry Fork, is being



rapidly developed and arrangements have been completed for the laying of a new siding.

#### ALABAMA

**Birmingham**—An examination of applicants for certificates as mine foremen and firebosses in the Alabama mines will be held in the office of Chief Mine Inspector C. H. Nesbitt, Chamber of Commerce Building, Jan. 21 to 24, 1918. This is the first session of the board since January, 1917, and it is expected that an unusually large class of applicants will be on hand. The examinations are generally held semi-annually—in January and July.

#### KENTUCKY

**Pine Knot**—Two men were killed and the Fidelity mines of the Stearns operations near here tied up by an explosion of coal dust and gas, which followed shotfiring. Two weeks will be required to clear the debris from the workings, it is stated.

#### OHIO

**Wellston**—Fires, supposed to be of incendiary origin, destroyed one tiple and damaged another of the Superior Coal Co., located in the Jackson field last week. The first fire occurred at Mine No. 8 of the company and caused a large loss. The following morning another fire was discovered at Mine No. 12. Heroic work by the miners prevented its total destruction. The closing down of the two mines means a reduction of 500 tons daily and the throwing out of work of 350 miners.

#### COX BLAMES FUEL ADMINISTRATION FOR OHIO SHORTAGE

**Wants Garfield To Investigate Actions of F. C. Baird, Dictator for State of Ohio**

Cincinnati—Gov. James M. Cox of Ohio has been energetic in his efforts to secure the diversion to local use throughout Ohio of coal consigned to Lake ports through the efforts of the Federal Fuel Administration and his action has brought on pronounced differences with both Washington officials and local representatives of the fuel administration, especially F. C. Baird, of Cleveland.

The fact that Mr. Baird was connected with a coal shippers' organization before taking up the work of the fuel administration in Ohio was characterized by Governor Cox as "an unspeakable outrage." Governor Cox declaring that Mr. Baird has used his authority as an agent of the Federal Government to move coal into the Northwest at high prices instead of permitting it to be used by distressed Ohio consumers.

Mr. Baird, in reply to these charges, asserted that he represents the Fuel Administration, the railroads and the operators, and that his sole object has been to handle the situation to the best advantage of all concerned. Mr. Baird came to Cincinnati to assist in working out the situation, and visited Russell, Ky., in connection with the preparation of plans for using that place as a pooling point for coal from some points.

As the principal factor involved in the continued movement of coal to Lake ports is the Federal priority order, so called, which is still in general effect, in spite of a temporary lifting of the order, Mr. Baird has insisted that he has no authority to release the order as a whole. Governor Cox has indicated his intention of forcing an investigation by Doctor Garfield, head of the Federal Fuel Administration, of Mr. Baird's actions since taking up the direction of the Administration's work in Ohio.

He states that the Coal Clearing House established by the state worked well, but that since the Federal Administration has taken hold Ohio and Ohio consumers have suffered severely, while Ohio coal, as well as that from West Virginia and Kentucky, has gone through the state to Northern points.

Governor Cox concluded a formal statement of his position in these words: "When the Lever act, known as the food and fuel act, was enacted, the Government laid its hands on the fuel and fixed a price. This price, however, could not interfere with contracts made previously to the passage of the law, as were the Lake contracts. Therefore, if there was no interference with the Lake trade this great traffic continued at prices unaffected by statute.

"Naturally, the operators desired the coal to go to the Northwest for reasons which are plain. It develops that when the Government took charge Doctor Garfield, for reasons which I think he ought now to explain, placed Mr. Baird in charge of all Lake coal. Since then the propaganda has

been insistent that the Northwest must be supplied.

"I say advisedly that there was more coal in the Northwest on Nov. 30, 1917, than there was on Dec. 15, 1916, when Lake transportation closed. Mr. Baird has pressed every ton possible into the Northwest at high prices, and Ohio has been starved to death. The industrial and domestic situation, which has broken before the eyes of Doctor Garfield, has created a profound sensation.

"My first communication with Mr. Baird was over the telephone this morning. His first question was as to guaranty of payment. His second question was whether I knew that price on confiscation would be the contract price on delivery in the Northwest. His resentment toward the state and his insistence on high price aroused my suspicion, and not until tonight did we know in the State House that the directing hand, serving as the representative of the Federal Government, was the head of the operators' pool. I use the words of extreme charity in saying this is an unspeakable outrage, and I shall bring it before the attention of the President at once."

#### DISCUSS TRANSPORTATION MATTERS Operators Meet To Devise Ways and Means of Combating Shortage of Coal Cars

Cincinnati—A large number of West Virginia and Kentucky operators, including representatives of the Guyan Valley Coal Association, with 105 operations, met in Cincinnati, on Dec. 14, to discuss with F. C. Baird, director of Lake coal traffic for the Fuel Administration, and others, the grave transportation difficulties now prevailing on the coal-carrying roads, and to arrive, if possible, at some means of relief. According to a communication addressed by the Guyan operators' organization, through President A. R. Beisel and Secretary A. H. Land, to Cincinnati fuel administration officials, in connection with the coal famine prevailing in the city, the mine operators have the coal to relieve the shortage, if only some means of moving it can be found.

It was declared in this communication that miners in the Guyan field have cheerfully been presenting themselves for work on Sundays and holidays, but that on account of lack of cars they have been idle five days a week of late. President Beisel stated that Cincinnati & Ohio officials attribute their inability to move coal to the extraordinary traffic in other lines, as well as to the failure of connecting carriers to move cars.

The Guyan operators are inclined to take the view that their field, employing 10,000 men, is discriminated against in the matter of car supplies, but other operators attending the meeting declare that they are in equally bad shape for cars. For example, Kanawha operators produced figures to the effect that for the first eleven days of December they had a total car supply of 3½ days, and New River operators, for the same period, had 4½ days' supply.

This has had the direct result of driving the miners to other work, notably in munition plants, where high wages and steady work are offered, and the demoralization of the labor supply in the several West Virginia fields is accordingly predicted as one of the most serious results of the car shortage unless it is promptly remedied.

Committees of operators on the several coal-carrying railroads were accordingly appointed, following the conferences of all interests involved, for the purpose of arranging for the pooling of all coal shipped west from West Virginia mines, in order to eliminate congestion in transit and expedite the movement of coal to distribution points, of which Russell, Ky., Decoursey, Ky., and Portsmouth, Ohio, have been designated as the first.

All discussions were directed at the single point of relieving existing congestion and devising means of keeping traffic moving, in order to relieve serious coal shortages everywhere in Ohio and to enable empty cars to be returned to the mines with all possible speed.

#### Personals

**James A. Gorman**, of Freeland, Penn., secretary of the Anthracite Conciliation Board, has been appointed as explosives licensor for the Lehigh coal fields under the Federal act, which recently became operative.

**John G. Millhouse**, superintendent of the Third Vein Coal Co., of Ladd, Ill., has been appointed by Evan John, superintendent of the Illinois state department of mines and minerals, as state mine inspec-

tor for the seventh district, effective Dec. 16. He succeeds Robert Pettigrew, of Danville.

**N. P. Payne**, formerly associated with Manning, Maxwell & Moore, Inc., of New York City, has opened an office in the Havemeyer Building, 25 Church St., New York City, as an electric crane specialist, supplying new and used traveling cranes of "certified character." Mr. Payne has had an extensive experience in this kind of work.

**W. A. McGinley**, of Beaver Brook, Penn., in charge of the Morea colliery of the Dodson Coal Co., has been promoted to general superintendent and manager of the Dodson operations at Beaver Brook, succeeding J. B. Connell, who has been promoted to general purchasing agent and manager of the company's offices and stores in both the anthracite and bituminous regions.

**C. M. Roehrig**, consulting engineer, of Huntington, W. Va., has accepted a position tendered him by the operators represented in the northeast Kentucky district as secretary of a new association recently formed known as the Northeast Kentucky Coal Association, with offices at Ashland, Ky., and expects to get started in his new work as soon as he can complete some special work that he is now engaged upon.

#### Foreign News

**Hamilton, Ont.**—A civic coal plant, the cost of which was estimated at about \$12,000, has been completed at an expenditure of \$37,000, of which \$15,988 represents the outlay on concrete coal pockets, calculated to save expense in handling the coal.

#### Obituary

**J. Blair Kennerly**, of Johnstown, Penn., owner of a number of mining concerns in Cambria and Somerset Counties is dead at his home in Ashenville, N. C., according to word received here on Dec. 12. He had been ill since last August. Mr. Kennerly was at one time one of the best-known coal men in the soft coal regions of Pennsylvania. He leaves a wife and one daughter.

**Joseph H. Woodward**, of Birmingham, Ala., president of the Woodward Iron Co., and a prominent pioneer developer and financier of the Birmingham district, died Dec. 15, after an illness extending over a period of about two years. In addition to the presidency of the Woodward Iron Co., operating a number of blast furnaces, and several coal and ore mines and coke oven plants, Mr. Woodward was vice-president of the First National Bank of Birmingham. He is survived by his widow, one son and two daughters, one of which is the wife of United States Senator Oscar W. Underwood.

**William H. Davies**, of Hazleton, Penn., 55 years old, superintendent of the Lehigh Valley Coal Co. collieries and the Cox Bros. & Co.'s mines in the Lehigh region, and prior to his appointment to that position a mine inspector in the lower anthracite fields, died at his home on Dec. 14, after a short illness. He was secretary of the board of trustees of the Hazleton State Hospital, and prominent in church and Masonic circles. Mr. Davies is survived by his widow, daughter, and by two brothers, Isaac M., state mine inspector, and George W., a prominent coal operator in the Panther Creek Valley.

#### Recent Coal & Coke Patents

**Snoke Jack**, S. A. Williams, assignor to Asbestos Wood Co., Nashua, N. H., 1-244,156. Oct. 23, 1917. Filed July 21, 1917. Serial No. 182,073.

**Receptacle for Ashes**, H. A. Poppenhausen and A. P. Strong, assignors to Green Engineering Co., East Chicago, Ind., 1,243,873. Oct. 23, 1917. Filed Nov. 18, 1916. Serial No. 132,021.

**Mining Machine**, D. T. Fisher, assignor to Jeffrey Manufacturing Co., Columbus, Ohio, 1,247,386. Nov. 20, 1917. Filed Oct. 8, 1913. Serial No. 794,122.

## Trade Catalogs

**Automatic Pumps and Receivers.** Worth-ton Pump and Machinery Corporation, 115 Broadway, New York. Bulletin D-1301. Pp. 12; 6 x 9 in.; illustrated.

**Westinghouse Direct-Current Motors and Generators.** Westinghouse Electric and Manufacturing Co., East Pittsburgh, Penn. Catalog No. 30. Pp. 80; 8 x 10½ in.; illustrated.

**A New Du Pont Products Book** has been issued by the E. I. du Pont de Nemours & Co., Wilmington, Del., which, in addition to the various explosives made by this company, also describes Fabrokoid, a leather substitute; Py-ra-lin, chemicals and paints made by its subsidiaries.

## Industrial News

**Louisville, Ky.**—The Louisville & Nashville has placed an embargo on coal for points north of Cincinnati, due to the congestion at that crossing and beyond.

**Jefferson City, Mo.**—The industries at the state penitentiary have been closed down because of lack of coal. The Southern Coal, Coke and Mining Co. has the contract. The railroads are blamed.

**Granite City, Ill.**—Large industries here are facing a shutdown because of fuel shortage. There are mines nearby, but it is said that there are not enough locomotives to haul it to the plants in severely cold weather.

**St. Charles, Mo.**—The retail price of coal in St. Charles has been set at 19c. a bushel by the St. Charles Fuel Committee. In the county dealers are allowed 75c. a ton additional on track. The prices are subject to change after dealers have been given a hearing.

**St. Louis, Mo.**—Seven municipal coal stations have been in operation during the cold wave of the past week. The demand was so strong that the maximum sale to each purchaser had to be reduced from 5 bushels to 3 bushels. The price at the stations is 16c. a bushel.

**Lexington, Ky.**—Both Lexington and Nicholasville, Ky., have filed complaints with the Kentucky Railroad Commission against the Cincinnati, New Orleans & Texas Pacific (Southern) alleging discrimination in rates on coal from the mines on the lines of the company.

**Owensboro, Ky.**—When the local Fuel Control Board fixed prices for this district, operators of mines in this county declined to abide by the order. It would have required them to sell coal at a cost lower than provided for by the Government. The local committee thereupon made an adjustment.

**Springfield, Ill.**—W. B. Jess, president of the Springfield District Coal Mining Co., has donated 250 tons of coal to be distributed by "Good Fellows" to the worthy poor at Christmas time. At \$3.25 a ton the value of the gift is \$812.50. Cars will be loaded at the mine and sent to sidings in the city, from which it will be distributed. Other companies are expected to make contributions.

**Chicago, Ill.**—Roberts & Schaefer Co., engineers and contractors, inform "Coal Age" that the contract price for the construction of the new coaling plant for the Philadelphia & Reading Ry. at Erie Ave. and Lawrence St., Philadelphia, Penn., is \$265,000 and not \$170,000, as was erroneously stated on p. 991 of our Dec. 8 issue. The structure is to be of concrete and steel, and will be modern in every respect.

**St. Louis, Mo.**—Team owners having the contract for hauling coal to the city institutions have given notice to Supply Commissioner Thomas that they want \$1 a ton, an increase of 25c. a ton over the present rate, on account of the increased cost of horse feed. Last October the rate was increased from 62½c. to 75c. a ton. The contractors are Henry Schuttenberg, the Wurst Coal and Hauling Co. and the Heineke Coal Co. The city will grant the increase.

**St. Louis, Mo.**—Following the announcement from Washington that the Shipping Board has set aside \$3,360,000 of its ship-building fund for the construction of 24 barges and four tugs for Mississippi River traffic, the Chamber of Commerce is discussing the feasibility of raising a like amount in St. Louis for the same purpose.

The barges are to be used in carrying coal from St. Louis to the northern part of the valley and bringing iron ore back to St. Louis.

**Charleston, W. Va.**—Twenty-eight fatalities occurred in West Virginia mines during the month of November, according to reports made public by State Chief of Mines Earl Menry. McDowell County led with six deaths; Logan and Fayette Counties had five; Mingo and Raleigh had four; Marion had two and Harrison and Kanawha had one each. Twenty deaths occurred inside the mines and six outside. Twenty-five killed were Americans and three were foreigners.

**Birmingham, Ala.**—By order of the U. S. District Court, the properties of the Jenifer Furnace Co., bankrupt, will be sold by the trustee, W. Aubrey Thomas, of Niles, Ohio, at Anniston, Ala., on Jan. 7, 1918. The properties of the company include a furnace plant at Jenifer, Talladega County, 9000 acres of brown ore lands near the latter point, and about 500 acres of coal lands in Jefferson County, on which is developed the Weller mine. None of the plants has been operated since 1913.

**Jefferson City, Mo.**—Interstate coal control, as between Missouri and Kansas, has been assured by a working agreement entered into by Missouri Administrator Crossley and Kansas Administrator Carey, under which John Mayer, of Kansas City, is appointed Chairman of an interstate committee, which will handle distribution throughout the two states. The committee is empowered to govern coal consignments at the mines in transit or in railroad yards throughout the two states.

**Pittsburgh, Penn.**—Although it will cost \$200,000 to open a municipal coal mine on the city farm, at Mayview, the Councilmanic Finance Committee affirmed a motion to authorize a sale of \$200,000 bonds to finance the project. According to the figures, the city will save on cost of fuel the very first year of operation \$75,000 more than the expense of opening, equipping and operating the mine. Council has already authorized a bond issue of \$100,000, but since then the cost of labor, supplies and machinery has gone up.

**Springfield, Ill.**—The Central Illinois Operators' Association, at its annual meeting here, elected these officers: President, H. C. Adams, of Chicago; vice-president, E. H. Buckley; secretary and treasurer, W. J. Walsh; executive board, Col. J. W. Jefferson, L. W. Senseney, Eugene Colgan, George Solomon and D. A. Watson; Dan Clark was re-elected commissioner. The organization discussed and approved the automatic fine clause and adopted a declaration that the members are behind every effort to stimulate coal production.

**Cincinnati, Ohio.**—The Federal Coal Co., recently organized to handle coal properties in Bell and Knox Counties, Kentucky, heretofore owned and operated by an older company, known as the Continental Coal Co., has appealed from an order of injunction issued by the United States District Court at Covington, Ky., restraining the company from asserting any ownership over the properties involved. Receivers were also appointed, as recently reported. The appeal was taken to the United States Circuit Court of Appeals at Cincinnati.

**Cincinnati, Ohio.**—Curtalement of street-car service by the Cincinnati Traction Co. and several suburban lines is probable, on account of the fuel shortage, which has placed the companies affected in grave danger of inability to produce current. The Cincinnati Traction Co. reports a coal supply sufficient for only a few days on hand, and while additional coal is expected soon, the margin is too narrow for safety. The reduction in service, if carried into effect, will probably be permanent, as a conservation measure desired by the Federal authorities.

**East St. Louis, Ill.**—State Fuel Commissioner Crossley, of Illinois, has wired Fuel Administrator Garfield asking that Federal action be taken toward clearing up the freight congestion in the East St. Louis yards and terminals. He also asks that a Federal agent be sent to East St. Louis with power to give orders to the railroad centering there, as well as to the Terminal Railroad Association of St. Louis. Mr. Crossley says that much of the blocking of free movements of coal to St. Louis and to other Missouri points is caused by freight congestion in East St. Louis.

**St. Louis, Mo.**—The St. Louis Coal Club, at its last meeting, took steps to contribute about fifteen carloads of coal to the Provident Association, the St. Vincent de Paul

Society and the United Jewish Charities for the poor. A committee was appointed, composed of W. H. Boehmer, E. L. May and John Henderson, to look after it. Operators will contribute the coal, jobbers will assume the freight charges and retailers will make free deliveries. Secretary E. J. Wallace and E. L. May were appointed to look after sending Christmas remembrances to all St. Louis coal men who are in the army.

**Toledo, Ohio.**—The Lake season, as far as loadings at the docks are concerned, is now over. On the whole it was quite successful in every way, and a large increase at many of the docks is reported. The Toledo & Ohio Central docks loaded 2,369,644 tons, as compared with 1,419,032 tons in 1916; 1,430,000 tons in 1915 and 1,300,000 tons in 1914. The last week ending Dec. 14 showed that 13,813 tons was loaded. The Hocking Valley docks handled 4,830,636 tons during the season of 1917, as compared with 4,031,424 tons in 1916; 2,658,587 tons in 1915 and 2,335,976 tons in 1914. The loadings for the last week ending Dec. 14 were approximately 42,000 tons.

**Cincinnati, Ohio.**—The breaking of an ice gorge which formed in the Ohio River as a result of zero weather caused considerable losses to coal companies with barges on the river, many steamers and barges being carried down the river and some of them capsized or were damaged. The Whitestone Coal Co., the Hatfield Coal Co., the Ludlow Coal Co., the Campbell's Creek Coal Co., the T. J. Hall Co., the John Grefe Coal Co., the People's Coal Co., the Mar-met Coal Co., the Reliance Coal and Coke Co., the Queen City Coal Co., and others, lost barges and coal. The total loss to Cincinnati coal concerns caused by the breaking of the gorge is estimated at nearly \$200,000.

**St. Louis, Mo.**—Wallace Crossley, Missouri fuel administrator, has been authorized by Administrator Garfield to extend his jurisdiction over the East St. Louis switching district and as an immediate result the congestion which has existed on the east side is being cleared up. The Terminal Association, under pressure of the War Board and the Fuel Committee, brought 186 cars of coal across the river last Saturday and about 200 cars Sunday. Daniel C. Nugent has resigned as a member of the St. Louis Fuel Committee to enter the United States aviation service. It is unlikely that anybody will be appointed in his place. Samuel Baxter, East St. Louis administrator, will act with the St. Louis committee.

**Louisville, Ky.**—By the action of Wiley E. Bryan, Fuel Administrator for Kentucky, a menacing coal famine in many of the centers of population of the state, which has been in the grip of arctic weather for ten days, has been relieved. With the approval of Doctor Garfield, he has seized fully 150,000 tons of coal on cars at Ohio River crossings or billed to points north of the river and held up because of inability of Northern lines to receive the coal from the Louisville & Nashville. This coal, excepting only that billed to public utility plants, is being distributed by the Louisville & Nashville to points throughout the state. Dealers deposit \$200 with their local banks and make application for the coal which is sold at whatever price is named in the billing. This action will tend to relieve the congestion temporarily, as well as the famine in Kentucky, and enable return of the empties to the mines where reshipments are to be made on the coal commandeered.

**Columbus, Ohio.**—Progress is being made in organizing the various pools, to be under the authority of the Coal Shippers' Terminal Pool Association, organized at Cleveland about a month ago. Pools are now planned in Cleveland, Columbus, Toledo, Detroit, Pittsburgh, Canton, Youngstown, Akron and Cincinnati. The Cincinnati pool will be a complicated affair with separate pools located at Portsmouth to take care of Norfolk & Western shipments, one at Russell to take care of Chesapeake & Ohio shipments, and one at De Coursey to take care of Louisville & Nashville shipments. All of these pools will be under the control of a central body in Cincinnati. The general manager of all the pools will be C. R. Moriarity, formerly of the Cabin Creek Consolidated Co., of Cincinnati. He is the one man in authority under the General Executive and Advisory Committee. Plans are now being made to get all of the pools in operation by Dec. 24. In the Columbus pool, B. F. Nigh, secretary of the Michigan-Ohio-Indiana Coal Association, has been made director. A meeting of the directors was held Dec. 15 to arrange details for offices, accounting and inspection.



# Market Department

## GENERAL REVIEW

Extreme weather conditions have curtailed the supply and intensified demand. Stoppage of freight movement renders conditions serious in many localities. Some plants will close down for one to two weeks during the holidays in order to accumulate a supply.

**Anthracite**—The severe cold wave which descended upon the country somewhat over a week ago has produced ill-effects in two directions—by interfering with mine operation and by hindering freight movement and distribution. The depth of snow in the anthracite region has been excessive for the time of year, in some places there being from 20 in. to 2 ft. on the ground. So difficult has this rendered car movement that in some instances collieries for even whole districts have been shut down for short periods. The loss of production has, however, been less than might have been expected. On the other hand, weather in the neighborhood of zero has rendered recovery of culm from the banks wellnigh impossible, as this material being wet freezes readily. The cold weather thus interferes seriously with the flushing of this material to the conveyor lines. Washeries, also, whether preparing culm or freshly mined coal have experienced serious difficulty on account of the extremely low temperatures. The most serious result of the cold, however, has been the precipitation of snow and the serious interference thus caused with car movement. The movement of coal has thus been slow and uncertain and the cost of unloading at destination has been excessive. The distribution of coal to the consumer was rendered highly difficult by snow-clogged streets and slippery pavements. Demand was also greatly intensified by the cold, as might be expected. In all the larger cities consuming anthracite long coal lines besieged the offices of the smaller dealers, some of whom had their yards swept bare, while others were able to dole out small quantities of fuel to their customers. Delivery of large amounts was for several days wellnigh impossible. Conditions in this respect were particularly critical in New England.

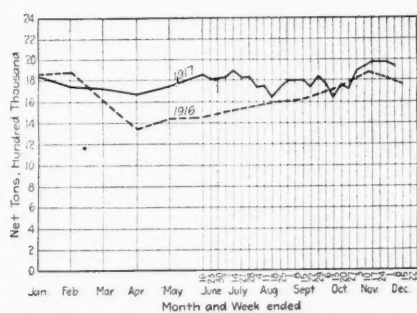
**Bituminous**—From everywhere come reports of railroad congestion, slow car movement, insistent demand and impossible delivery. The call for coal was, of course, most urgent among the poor of the larger cities, and those who habitually purchase their supplies in small amounts. The local fuel administrators in many cities have been kept busy relieving cases of distress and suffering. Authorities in Kentucky went so far as to confiscate a large amount of coal which had long been standing on side-tracks awaiting transportation northward. This coal was distributed throughout local territory, and the cars thus relieved returned to the mines for reloading. It is stated they can be returned to the various junction points, again loaded and ready for delivery northward by the time they can be accepted by the northern transportation lines. Various expedients have been adopted, or are in contemplation by fuel administrators and consumers. Many industrial plants finding themselves desperately short of stocks have determined to close down for from one to two weeks at the coming holiday season, in the hope of accumulating sufficient supplies to render a fresh start possible, with reasonable assurance of continued operation during the balance of the winter. School boards are in many instances adopting a similar program.

During the past week there was, in many instances, not enough coal to satisfy priority orders. Thus many byproduct ovens did not receive sufficient fuel to keep them in continued operation. The priority situation has become so complicated and muddled that there is a strong feeling that all the priority orders should be abolished and a fresh start made. It is doubtful if this program will be followed until the President has made his recommendation to Congress concerning the management of the railroads.

**A Year Ago**—Cold weather stiffens up the anthracite domestic business. Bituminous prices recover. Negotiations on new contracts beginning. Car shortages and embargoes cause uncertainties. Middle West situation mixed though steady.

## COAL PRODUCTION

Production during the first 8 days of December fell but little below the level attained during November. The total output of bituminous coal (including lignite and coal made into coke), is estimated as 11,133,220 net tons for the week ended Dec. 8. This was at the rate of 1,855,537



net tons per working day as compared with 1,887,534, the daily average during the week of Nov. 17.

The total production of beehive coke during the week ended Dec. 8 is estimated as 618,494 net tons, an average per working day of 103,082 tons. Shipments of anthracite largely recovered from the slump attending the Thanksgiving holiday. The nine anthracite roads originated 40,566 cars.

## CARLOADS OF COAL AND COKE ORIGINATING ON PRINCIPAL COAL-CARRYING ROADS WEEK ENDED:

District	Nov. 17	Nov. 24	Dec. 1	Dec. 8
Bituminous shipments, 114 roads	201,787	199,385	182,275*	198,169*
Anthracite shipments, 9 roads	42,024	42,936	37,533	40,566
Beehive coke shipments, 4 roads	12,784	13,178	13,055*	12,697†

\* Revised from last report. † Subject to revision.

## BUSINESS OPINIONS

**The Iron Age**—The handicaps on pig iron and steel production have been increased in the past week by heavy snows in the East and Central West, causing fresh shortages in coal and coke. The week's steel output in the Youngstown district has been only about half of the capacity; at Cleveland the American Steel and Wire Co.'s plants were closed down for nine days; in eastern Pennsylvania five furnaces were banked; 20 were banked early this week at Pittsburgh and in the two Valleys; and throughout the country the coal situation of iron and steel works has been either worse or unimproved.

**Bradstreets**—Activity continues to emanate from Governmental buying; industries, notably automobile factories, are being converted to war lines, and the cold snap with snow has accelerated demand for heavy-weight clothing, shoes and rubbers, but at the same time the elements have added to already congested conditions, caused further paucity of fuel supplies and have resulted in the closing down of some industrial plants. However, the blanket of snow covering the winter-wheat belt is of great potential benefit.

**The Dry Goods Economist**—The response to the holiday sale ads has not thus far been all that could be asked. In some centers sales have been very backward. While in others conditions have been better, nowhere has the general public responded with the desired enthusiasm. Many departments have been quiet at times when they should have been thronged.

**American Wool and Cotton Reporter**—Business in wool has been fairly quiet, but with no weakness. Moderate buying on medium wools for Government purposes has been going on. The offer of the wool trade to sell at any time to the Government during the next six months at today's market prices, half of each lot of new clip South American wools has had an effect of stabilizing prices.

**Marshall Field & Co.**—Current wholesale distribution of dry goods is running ahead of the shipments for the same period a year ago. The total volume of road sales for both immediate and future deliveries has been in excess of the heavy volume of the corresponding week in 1916. Merchants have been in the market in fewer numbers. The market on domestic cotton continues strong. Collections are excellent.

## Atlantic Seaboard

### BOSTON

Situation reaches alarming stage. Receipts fall off in all directions. Detention at Hampton Roads and at practically all ports. Movement of every kind slow. Some relief expected at Hampton Roads when motive power is increased, but instead of priority orders there is now an embargo against coal via Boston & Maine. Several cities on ragged edge of no supply and number of plants closing down increasing daily. Only apparent outcome will be the worst fuel famine known. Anthracite shipments also extremely light.

**Bituminous**—Real anxiety is now the position of a large number of steam users. Railroads as well as street car lines throughout New England are operating on very narrow margins of fuel supply. Currents of service are in effect on several suburban lines and there is no telling what emergency measures may be necessary a fortnight hence. A few large corporations were able to stock ahead, but there is at least an even chance that some of them may have to share their surplus with plants less fortunate. The rehandling plants which had become practically the only source of emergency supply have now had to suspend all shipments inland except on contract obligations, at least until further cargoes arrive. These plants have been called upon to meet situations over a wide area, and in many instances coal has been passed along from one point to another where no through rates apply and took the high local rates. One of the railroads, a main artery for coal all-rail into New England and having its own Tidewater terminal, has been taking fuel from Providence and transporting it 25 miles over another system.

The larger cities are also feeling the pinch on steam coal. Boston has a comfortable supply for immediate needs, but Portland and Providence are existing from day to day on meagre receipts. Public utilities have had cargoes diverted from consignees more favorably situated but there must soon be a limit to such accommodation. A large re-handling plant at New Bedford, Mass., was depending for supply on cargoes that were lost in recent gales, and is now practically bare of stock, with a large number of consumers looking to it for fuel. And there are several similar cases of near distress that are not likely to be corrected for some time to come.

One of the ominous features is the long detention at Hampton Roads to which practically all the coastwise steam colliers are subject. The cold-weather added to the difficulties of dumping, a week's delay and a \$10,000 demurrage bill on a ship is not exceptional. The Federal Shipping Board has taken charge of bunkering arrangements but no improvement is observable as yet. Receipts are fast diminishing on account of the time it takes to get ships loaded, and factors here do not dare count on less than 3 weeks for a round-trip, where under normal conditions a week is the usual practice.

The chief complaint is the slow movement from the mines to Tidewater, and this coupled with the enormous demand for naval and other Government services is naturally reducing the tonnages for New England at each pier. Twenty-five locomotives have now been ordered from other railroads to help out the N. & W., the C. & O., and the Virginian, and this affords hope of some little relief. It is obvious, however, that this territory cannot count upon any increase in shipments from Hampton Roads while Government requirements are as urgent as at present. Not a

thing is heard these days of the 100 per cent shipments that were to be ordered for consignees in New England.

Priority orders for shipments all-rail have also been unavailing the last fortnight or so. On Dec. 17, the Boston & Maine announced that commercial coal is added to the commodities covered by the embargo against east-bound freight. It is said there are fully 2000 cars of coal in transit to New England via and on the B. & M., and that the embargo is placed because the extreme cold and snow have so slowed down the movement that it has been thought best to have further loading for the B. & M.'s handling temporarily held up. It covers all the B. & M. gateways, and only coal for railroads or to the Government is excepted.

The New England Wholesale Coal Association has now officially coöperated with the Fuel Administration by naming coal men to assist the New England administrator. The latter has very little free coal to work with, however, and under present conditions it is hard to see how his office can be of much real assistance to consumers in stress for fuel.

#### NEW YORK

Local conditions relieved by heavier shipments of anthracite. Producers say the worst is over. The anthracite steam coals are scarce, but conditions are improved. Dealers confer with the fuel administrators and urge large receipts. The bituminous situation is practically unchanged. Supplies are scarce.

**Anthracite**—The fright occasioned by the scarcity of supplies has passed away after several days of effort on the part of the dealers and the fuel administrators. In the meantime, however, this city was on the verge of a hard coal famine. Many yards throughout the Greater City were closed and those dealers who were fortunate enough to have any coal in their yards were swamped by crowds who wanted a pair or two to keep their homes warm. In many instances the police were necessary to keep the crowd in line.

The serious situation was increased by the heavy snowstorm followed by intense cold weather which impeded shipments across the Bay and practically tied up all deliveries for more than 24 hours.

Federal and state authorities appealed to the producers to rush coal to this city and more than one company responded by sending solid trains of coal direct from the mines to the loading docks on fast freight time. As soon as possible this coal was shipped to the yards. In the meantime, large numbers of men were employed at the docks digging out the frozen coal.

At the Perth Amboy docks of the Lehigh Valley Railroad Co., President Loomis said that during 24 hours ending at 6 o'clock Saturday morning, 3300 tons had been unloaded and that during the next 24 hours, 5400 tons were taken from the cars. This work was kept up all of Sunday. On Monday the fuel administrators said they believed the situation had been relieved and the worst was over. It was announced that about 75,000 tons was on its way to or at the docks.

During the extreme stringency of the situation several city institutions and school buildings were nearly out of coal and it was feared that some of the schools would have to be closed.

Production was seriously interrupted by the heavy snowstorm, but by hard work on the part of the mine owners and employees work at the collieries was suspended but one day.

The producers promise large receipts here now that the Lake season has been suspended for the winter and that the needs of New England has to a large extent been satisfied.

The proposal to pool all coal cars is causing some comment among the large shippers of anthracite. They point out that the mines are now receiving full requirements in car supply while only in exceptional instances are any bituminous mines receiving more than 60 per cent. of their quotas. If the pooling of cars goes into effect, these shippers point out it will mean a loss of cars for the anthracite mines to the advantage of the mines in the bituminous fields and a resultant loss in shipments of anthracite coal.

Several propositions have been advanced for increasing the supply of anthracite, one of which is that it be shipped as run-of-mine, that is, that the product be sent through one set of rolls and then loaded for shipment. Household consumers could then do their own breaking of the large chunks to suit the grates in their stoves or furnaces.

Individual coals are in the background. Nothing is heard of them here. Wholesale

dealers say they cannot remember similar conditions.

The demand for the smaller coals continues heavy. All three sizes are scarce and owners of the office buildings have sent notices to their tenants urging conservation of light and heat.

The retail situation is serious. Dealers supplying the large buildings keep their drivers at work day and night. There have been several conferences held between the fuel administration authorities and representatives of the dealers looking toward an adjustment of the margin in fixing retail prices of coal.

Apartment house owners have appealed for help and some of them have notified their tenants that until the situation improves they will be allowed 10 cents a day off their bills to help them pay gas bills in order that they may be warm.

Current quotations, per gross tons, f.o.b., Tidewater, at the lower ports are as follows:

	Circular	Individual
Broken .....	\$6 30	\$7 05
Egg .....	6 20	6 95
Stove .....	6 45	7 20
Chestnut .....	6 55	7 30
Pea .....	5 05	5 80
Buck .....	4 30@5 00	5 75@6 00
Rice .....	3 75@3 95	4 75@5 00
Barley .....	3 25@3 50	3 70@3 95
Boiler .....	3 50@3 75	

Quotations for domestic coals at the upper ports are generally 5c. higher on account of the difference in freight rates.

**Bituminous**—The situation continues to be serious. Receipts are low and save for the contract coals coming to this market, they are negligible.

The increase of \$1.35 per net ton granted by the Fuel Administrator to the price of coal for bunkering or for export to foreign countries will, it is expected, have a beneficial effect upon local conditions.

Demand continues to be heavy but there is no coal here to meet it. Production at some mines is good, especially at those where the car supply is good and the employees are satisfied. At other mines located on railroads where the car supply is bad and labor disgruntled because of it, production is far below normal and the mines are shut down a part of every day.

The railroads continue to take care of their own needs first.

Shippers look for larger receipts of coal now that the Lake season has ended. With a greater tonnage being received here and the shortage of anthracite steam coals continuing, it is more than likely that users of the hard coal will turn to the use of bituminous, at least, in part, wherever possible, even though they would be forced to install smoke consumers to comply with the regulations of the Board of Health which forbid the emitting of black smoke from chimneys. There are some who believe these regulations should be waived until the coal supply becomes larger.

Operators are complaining of poor transportation facilities, some coal shipped around the first of the month not yet having reached its destination.

#### PHILADELPHIA

**Anthracite production cut by severe weather. Retail situation serious. Consumers instructed to economize. Shipments very light, with outlook unpromising. All sizes in maximum demand, including steam coals. Bituminous extremely short. Winter weather hampers rail movement. Car supply critical. Investigation welcomed. New bunker prices. Contract situation in doubt.**

**Anthracite**—With record-breaking cold weather for so early in December, together with several snowstorms, shipments have fallen behind at a time when coal was badly needed. At the mines the weather has been severe, with zero temperatures and a snowfall of over 20 in. This not only hampered production, but delayed deliveries. Washery operations which play an important part in production were seriously curtailed on account of the frozen culm and the difficulty of handling the water.

Realizing the seriousness of the situation the railroad people utilized all the available passenger and extra crews in an effort to keep coal moving to market. It has been estimated that during the week the production has been cut fully 40 per cent., since on at least two days no coal was mined in the majority of the operations.

Previous to the coming of the cold weather fairly good shipments had been arriving in the city and at times these almost approached normal. Arrivals, however, suddenly ceased and men and women besieged the coal yards, where the bucket

trade is the heaviest. In many cases the retailers' offices were closed, but the yards were purposely left open so that the people could see that there was no coal on hand to sell them. Others who had small stocks but had orders to cover them many times over, disconnected their telephones. In one instance, a car of coal arriving on Washington Ave. was attacked and every pound of it carried away in buckets. The police made a number of arrests, but the magistrates discharged the prisoners.

The Fuel Committee has done all in its power to relieve the local situation and is now directing efforts to devising means of economy. It is claimed that while many of the smaller houses are without sufficient fuel to avoid sickness, some of the large hotels, protected by contracts for coal, are overheated. The chairman of the fuel committee states that to heat a home or hotel above 68 deg. is a waste of fuel; several hotel men have been notified that unless they take steps to conserve coal their supply will be ordered cut. The chairman is also arranging to have about 100 experts make a house to house canvass to instruct householders to use coal intelligently. A number of prominent business men have asked the coal committee to investigate means for the curtailment of the use of steam and electrical power wherever possible. They also ask that the ruling in regard to electric sign lighting be enforced. Elevator service may be reduced and other apparatus and machinery dispensed with temporarily until the situation is relieved.

It has been a strenuous week in the office of the Fuel Committee, where crowds of people in need of coal, both rich and poor, have endeavored to have Chairman Lewis procure them a supply. He was finally compelled to issue a strong bulletin to the physicians of the city, wherein he said: "Do not send patients to me with your certificates of the immediate need of coal on account of illness. You are causing them trouble and loss of time. Come yourself." To the dealers he issued an order which said: "When you cannot deliver coal to customers, do not send them here. You know you are sending them on a futile errand to save yourself trouble. They will not thank you and neither will the fuel committee."

The new prices for the sale of coal in small quantities has now been published by the coal committee. The figures are based on the bushel of 75 lb. and all sales must be made by actual weight, no buckets, baskets or bulk measurement of any kind being allowed.

The prices for a quarter bushel of 18½ lb. are as follows: When sold by peddler, nat coal, 13c.; pea, 11c. When sold by a street-keeper, nat, 11c.; pea, 9c. Sales by all others, including the usual retail coal yards, nat, 10c.; pea, 8c.

There seems to be an undercurrent of feeling among the operators that too much hard coal was shipped to the West and Northwest this year. The opinion continues to grow that each community should be compelled to use the kind of coal which lies nearest to it, especially communities in parts of the country right up against soft-coal mines, yet who insist on burning anthracite.

Shipments over both the Pennsylvania and Philadelphia & Reading railroads have been light this week. A canvass of the yards showed more "No Coal" signs displayed than at any time during the year. Sales agents are giving little encouragement and call attention to still lighter shipments which are probable between Christmas and New Year's day.

There is still the same proportionate demand for all sizes from broken to culm. Of the domestic sizes, in which we now include pea, there is no choice. Household-ers who are asking for egg readily accept pea, and vice versa. In fact, the dealers care little whether they receive egg, stove, nut or pea.

The steam sizes are just as active, and even barley that was comparatively free a few days ago, is now strong. Heavy sales of culm also continue to be made and some shippers profess to believe that a permanent market has now been created for this material. The average prices for steam sizes as sold by the independents are: Buckwheat, \$4.15; rice, \$3.35; barley, \$2.35, and culm, \$1.25.

Many of the shippers still continue to receive heavy orders from the Government for shipment to the cantonments, although it is now felt that arrangements will be made whereby this tonnage can be distributed in equal proportions over an extended period, rather than delivering it all at once and thus disrupting the domestic trade.

It is hardly worth while to speak of collection for there are certainly no collectors. The retail business has been placed



on an almost strictly cash basis, and bad accounts among the wholesalers are the least of their troubles.

The prices per gross ton, f.o.b. cars at mines for line shipment and f.o.b. Port Richmond for Tide, are as follows:

Line	Tide	Line	Tide
Broken.....	\$5 90 \$6 05	Buck.....	\$3 15 \$3 75
Egg.....	4 80 6 00	Rice.....	2 65 3 65
Stove.....	5 05 6 35	Boiler.....	2 45 3 55
Nut.....	5 15 6 40	Barley.....	2 15 2 40
Pea.....	3 75 4 65		

**Bituminous**—Receipts of bituminous recently have been barely sufficient to meet current needs. The greatly congested rail conditions were further added to by a week of unusually severe winter weather for the time of the year. With snow storms all over the state, the rail lines had much difficulty in keeping coal moving. Frequent reports continue to come in of plants compelled to close for lack of fuel, and we have heard of instances where manufacturers, taking advantage of the usual disruption to labor during the holiday season, will close for an entire week and endeavor to accumulate a coal supply during the suspension. Some utility plants in nearby towns have experienced difficulty recently in keeping going and in one instance a municipal water-works was only saved from shutting down by several industrial plants proffering a coal supply for the next three weeks.

The producing interests are doing everything possible to convince those in authority that the one thing essential to enable production to meet the demand is an adequate car supply. Perhaps the need in this respect is more acute among the smaller shippers.

The Congressional investigation of the coal trade is welcomed by all with the hope that the true facts as to present conditions will be brought to light and the necessary relief extended.

Nothing new seems to develop in the price situation, although it is with some satisfaction the shippers learn that they will likely be granted an increase in bunker and export coal.

There is no free coal in the market, except that sold for smithing purposes. The demand for this coal becomes greater each week. While it is difficult to place orders, the prices range from \$4.50 to \$5.50 per net ton at the mines.

Shippers are receiving frequent requests from contract customers asking what their position will be after the first of the year, when their contracts expire. At this time there is nothing definite given out and their customers are becoming quite anxious to know the outcome. With them it is not a question of price but the more important one of supply.

#### BALTIMORE

The city has been in the throes of a coal famine, which for a time stopped big industries and left hundreds of homes and institutions without fuel. Temporary and partial relief given.

**Bituminous**—The city of Baltimore has been caught in the greatest coal famine of its history. Thirty of the largest industries, including shipbuilding and steel plants, were closed for a time, others are working on part schedule, and all are traveling on a day-to-day basis. The lighting company faced shutdown several times, but coal sent through by the Washington fuel administration has kept it moving on a 24- to 48-hour basis. The street car service is working on a 40 to 80 per cent. basis. There is practically no unattached coal here and that under way from the mines is totally insufficient to meet all needs.

The gravest concern is felt over the situation. Only the most rigid economy, and distribution by operators and jobbers under direction of the Washington and Maryland coal administrations has kept many plants working. No one asks about prices, it is merely a question of getting coal. Not a few of the operating officials blame the railroads, saying that plenty of coal can be mined if cars can be supplied. Everybody, in fact, is blaming everybody else these days of coal scarcity.

**Anthracite**—The hard coal situation too has been frightfully acute. Yards are practically clean of coal and what little fuel comes through is being distributed only to the most urgent cases of want. The poor are hard hit, and some bushel trade yards are out of business for a time. The fuel administrator has established a price of 50c. a bushel for all kinds of hard coal from the yards and wagons, but as with soft coal, the price is not so much a con-

sideration with many as getting coal. During the week Mayor Preston endeavored to get 1500 tons of anthracite to distribute to the poor at cost, but failed, and then turned to soft coal. He secured six cars of this fuel and sold it at 18c. a bushel. The new anthracite schedule for retail trade as announced by the fuel administrator here is an increase of 45c. over the schedule in vogue in early October. This will care for the increased pay to miners and the transportation tax.

## Lake Markets

#### PITTSBURGH

**Coal movement very poor with but moderate prospects. Not enough to meet all priority orders. Fresh start needed in railroad operation.**

The coal movement is beginning to show a slight improvement over the average of last week, when it was suffering from the spell of zero weather. Thus far there has been little improvement, but hopes are entertained that by the end of the week conditions will be measurably better.

Until last week it was possible for the coal operators to meet all the priority orders in force, and still have a little coal left for regular trade, although this was usually absorbed on contracts, leaving practically no free coal for the open market. When the cold snap arrived the movement became so poor that even the priority orders could not all be met. For instance, the local coal administration at the beginning of this week called upon certain operators to ship coal for domestic consumption. Their coal was involved in priority orders for by-product coking, and on telegraphing Washington for release to the extent of shipping coal for domestic consumption the release was denied. Some relief was furnished by breaking the ice in the Monongahela River and bringing some coal by water. The by-product ovens are not fully supplied and a number of the steel mills have had their operations restricted. Coal shipped is being dispatched fairly well, but the return of empties is poor.

The opinion is growing that it will be necessary to make a fresh start in railroad operations by removing all the priority orders and beginning over again with a national traffic manager who shall prescribe all the priorities afresh. No definite step is likely to be taken, however, until the President decides upon his recommendations to Congress as to what is to be done with the railroads.

There is no regular coal market. Occasionally some coal can be picked up, but it is usually odds and ends, including coal loaded in box cars. We quote the market at the set prices, \$2.20 for slack, \$2.45 for mine-run and \$2.70 for screened, per net ton at mine, Pittsburgh district, with 15c. extra permissible to be charged when sales are made by jobbers.

#### BUFFALO

**Weather does its worst to make the situation bad. Cars are very short of the bituminous needs. No improvement yet. Anthracite more plentiful.**

**Bituminous**—The supply is less and less every week. Shippers do not see how the factories are going to run much longer unless some relief is afforded. So far nothing has appeared which seems likely to better conditions. All that is needed is more coal and if that is not provided it will be useless to study the case and find out who is to blame for the shortage. The consumer wants coal and not argument.

The big snow storm is said to have been more severe here than through the country generally. There is nearly 2 feet of snow in the city and more comes almost every day. All movements are not only slow, but the consumption of coal for heating is heavy.

All conditions count heavily against the supply side of the question. Before the big storm some of the shippers began to get more coal at Government price and a few of them still report it, but as a rule the excess supply is running down and must come to an end before long. That is has not done so already is a wonder to the trade generally. If business is to go on the movement must increase pretty soon. Car shortage is the chief difficulty.

The desired regulation of the price of smithing coal has not been announced yet, though it has been asked by shippers here, so it, as well as cannel, is selling for a dollar or more over regular lump. Quotations, with at least some coal moving at

the prices, remain as follows, per net ton, f.o.b. Buffalo:

	Slack	Lump
Pittsburgh.....	\$3 75	\$4 25
Bess-mer.....	3 70	4 20
Allegheny Valley.....	3 60	4 10

**Anthracite**—As happened once before one of the largest shippers lately diverted a train load to the local trade and the result was that for some days the supply was more than the dealers could haul. This has cleaned up the bona fide complaints, as it produced more coal than all consumers could use, while the other shippers were delivering an average amount.

There is still the old story of distress everywhere, but that will go on just the same, no matter how much coal there is to distribute. Buffalo consumers have a good percentage more anthracite in their cellars than they ever had before, but they want as much more in order to feel safe that the mines are not able to provide it. It is expected that the extra demand will continue indefinitely.

The Lake season closed suddenly with the great snow storm of the 8th. The anthracite shippers were not much disappointed for they feel that they have enough coal in the Northwest to last till spring, though it would be out of the question to satisfy the demand. Shipments by Lake for the season were 4,106,598 net tons, as against 2,800,740 tons in 1916. The excess as shown is a trifle misleading, for a shipper that has always brought all his water coal here till last year shipped 750,000 tons over the docks at Erie, Penn., then. Another shipper who sent 200,000 tons to the Upper Lakes from Oswego, did not ship any during the past season. This reduces the grand total by nearly 1,000,000 tons, but still leaves a good margin of excess.

#### TORONTO

**Coal shipments held up by snow blockades. Yards empty. Dealers only delivering small lots. Increase in price of anthracite.**

Owing to recent snow blockades causing a congestion of traffic at border points, railroad shipments have latterly been much delayed and a scarcity of coal is being experienced. The yards are empty and dealers are making deliveries from the cars in small lots. Consumers in the central portion of the city have been kept well supplied, but residents in the outlying districts have suffered from the shortage. The price of anthracite has been increased 35c. per ton, but bituminous rates are unchanged.

Quotations for best grades per short ton are as follows: Retail Anthracite, egg, stove, nut and grate, \$9.85; pea \$8.85; bituminous steam, \$9; slack \$8 to \$8.50; domestic lump, \$10; cannel, \$11; wholesale f.o.b. cars at destination three-quarter lump, \$7 to \$7.50; slack, \$6.85 to \$7.

In some cases rehandlers who receive cargoes at Boston or Providence the tonnage of which is utterly inadequate for all purposes are putting the situation squarely before the local fuel authorities as to what would be the fairest and best distribution. Steamers arrive with heavy demurrage and unless the local fuel committees are willing to grant an increase in the retail price sufficient to cover it they cannot blame factors if the latter place the coal with customers inland who are more than willing to pay all charges in order to get the fuel. There are going to be some knotty problems for the fuel administrator to solve. Portland, Providence, Salem and New Bedford are on the ragged edge of no supply and scattered all over New England are many plants actually closed down, and the number is increasing every day. The gas companies are in a particularly bad way. Miners of producer-gas coals are obliged to furnish their quota for the Government.

Factors who contracted to deliver "requirements" in weekly proportions are getting seriously embarrassed, the larger the company the more awkward are its problems.

Quotations have again subsided. Such coal as is sold in advance of arrival is subject to demurrage and other extra charges. With those classified as "retailers" it would not be surprising to see \$10 again a selling price f.o.b. Boston, and this in strict accord with rulings of the Federal Fuel Administration and allowing only a small margin except for the owner of the ship.

The shortage of coal at Hampton Roads is reflected in recent requisitions by the Government on mines accessible to Philadelphia and New York. Operations that hitherto have had little tonnage moving to Tidewater and none to the Government

are therefore shipping much reduced tonnages on routine orders. The Fuel Administration is spotting these demands in different districts, but naturally the higher grades are the ones selected.

New England consumers are looking anxiously for the "car pool" that it was intimated would soon be forthcoming. This territory must always be confronted with the fact that it has no adequate business for the return haul on open-top cars.

It is understood that the Fuel Administration will issue an order increasing the price of Pocahontas and New River for foreign bunker trade. The advance authorized on Pocahontas is \$1.35, the new price being \$3.80 per net ton at the mines plus 15c. commission, tolls, and trimming, making the Norfolk price in the vicinity of \$6.15 per gross ton. This is in recognition of the higher prices being paid abroad by the British and other governments. Doubtless there will be some more scaling up later.

**Anthracite**—December is a great disappointment on shipments. Tows have been delayed by almost continuous gales, there has been ice in the Delaware, and dumping has been slow on account of frozen coal. Added to this are the requisitions on the order of the fuel administration, the net result being small receipts for New England. Several Boston dealers are bare of stock and others more fortunate are required to distribute where there are cases of real suffering. Some of the larger dealers are out of certain sizes and there is little or no water-borne coal en route.

With the holidays near the outlook for supplies of domestic sizes is all but hopeless. The B. & M. embargo affects a wide area for it includes all the Tidewater points on the Maine Central that lately have been getting emergency shipments all-rail. Gloucester and Salem, Mass., are still out of hard coal and practically no relief is in sight.

In Bangor and a few other cities an advance in retail prices has been allowed by local fuel committees to compensate dealers for increased cost of recent shipments. The Bangor price is now \$11, with 2 per cent. off for cash in 10 days.

#### COLUMBUS

The severe cold weather has caused some suffering in Ohio but the State fuel administration and others in authority are aiding in giving relief. Severe shortage of domestic and steam sizes features the market.

Continued cold weather and marked scarcity of domestic stocks have been the outstanding features of the coal trade in Ohio during the past week. Every effort is being made by the Ohio fuel administration to relieve the suffering, but because of congestion on railroads and a controversy over authority to dispose of Lake coal on tracks, the situation has been rather bad. There are comparatively few cases of actual physical suffering, although some have been reported. As a result of the fuel shortage, many of the manufacturing plants have been compelled to close down and others have been running with slight fuel supply.

Retailers have small stocks and they are still following the policy of delivering only a small amount to each consumer. The local fuel committees have been busy investigating cases brought to their attention and in many instances relief was afforded. One of the worst features was the fact that the railroads were unable to move loaded cars when within sight of the place where the coal was desired.

The steam trade has also been completely demoralized and all kinds of steam users have been without fuel. This applies to schools and colleges, hospitals, public buildings, public utilities and many manufacturing concerns. Later on, with the release of some of the Lake tonnage stocks were taken to relieve some of the cases.

Owing to lack of motive power and to car shortage, production in many of the Ohio districts was down at a low ebb. In fact, some districts produced less than 20 per cent. of the usual amount. The Hocking Valley and Pomeroy Bend are credited with 35 to 40 per cent. Eastern Ohio was probably in the worst shape as regards cars.

Prices on short tons f. o. b. mines are as follows:

	Hocking	Pomeroy	Eastern Ohio
Rescreened lump.....	\$2.70	\$3.05	.....
Inch and a quarter.....	2.70	3.05	\$2.70
Three-quarter.....	2.70	3.05	2.70
Nut.....	2.70	3.05	2.70
Egg.....	2.70	3.05	.....
Mine-run.....	2.45	2.70	2.45
Nut, pea and slack.....	2.20	2.45	2.20
Coarse slack.....	2.20	2.45	2.20

#### DETROIT

Disappointments and anticipations realized only in part feature Detroit market. Fuelless homes cause much suffering.

**Bituminous**—Expectations a week ago that Detroit, within a few days would receive a plentiful supply of bituminous coal for immediate needs are not realized. The supply of coal estimated at from 2000 to 5000 cars, forming part of the stock confiscated by the Government on congested lines of the Chesapeake & Ohio R.R., was supposed to begin arriving in Detroit about Dec. 10, but scarcely 400 cars of it had reached the city a week later. Assurances are given, however, that the coal is being started toward Detroit and other points in Michigan in solid trains.

**Anthracite**—Supplies of anthracite, which the federal fuel administration was expected to provide for Detroit, have not materialized to any great degree. Little coal is arriving and it is almost impossible to find a retail yard that can make delivery. The Lake freighter, B. F. Berry, bound up with a cargo of anthracite and trapped in the ice, is to be unloaded at Detroit to help relieve the situation.

#### CINCINNATI

Extremely severe weather and continued traffic troubles have resulted in a coal famine here, with many cases of distress among industries and the public.

Continuation of the unprecedentedly severe weather which began on Dec. 8, has brought about a remarkable condition as to fuel shortage, which Cincinnati has ever faced. Temperatures below zero have prevailed every day during the past week excepting two, and several more snowfalls have added to the difficulty of moving coal, both by rail and by wagon and truck in the city; while ice gorges in the river, forming as a result of the severe cold, have not only prevented further coal shipments by that medium, but have caused considerable losses of coal by sinking barges and landing boats.

Receipts of coal by rail have been limited, and until a few days ago such coal as moved from the mines has continued to go forward to the Lakes, although it is maintained by the state authorities that the Lake shipping season is now closed, and that there are hundreds of thousands of tons of coal at the docks which will have to lie there all winter.

The net result of this combination of unfortunate conditions is that Cincinnati, which is closer to large coal supplies in three states than any other city in the country, not excepting Pittsburgh, is actually suffering for want of fuel in the coldest December weather experienced in over 40 years.

#### LOUISVILLE

Distribution difficulties, caused by storms, dominate coal situation. Kentucky fuel administration commandeers sidetracked railroads for distribution in state. Car supply light and late.

On order of Doctor Garfield, Fuel Administrator Bryan, of Kentucky, has seized about 150,000 tons of coal on Louisville & Nashville tracks billed to points north of the Ohio River, and with the cooperation of the railroad company is distributing it to communities in the state which are without fuel. Only priority coal and that billed to utilities is exempt.

This discloses the situation in Kentucky. Much of the coal in question had stood for more than a week awaiting delivery to railroads north of Ohio River crossings. Meanwhile empties were not being returned to the mines. The order of the Fuel Administration is rapidly relieving the famine in Kentucky, temporarily, and will expedite return of empty cars to the mines, while it is declared that they will be loaded and ready for delivery to river crossing points by the time they can be handled.

A week of cold weather, coupled with traffic-disorganizing snow, has exhausted most of the reserve supplies in Kentucky, while at the same time the demand has been tremendously increased until much, if not all of the output of the state's mines for weeks could be disposed of inside the state boundaries. Coupled with the other circumstances there has been almost a total failure of the natural gas supply in Louisville, Lexington, Winchester and other central Kentucky towns, with a corresponding increase in the demand for coal.

#### BIRMINGHAM

Industrial and domestic demand continues strong, and shortage in supply is pronounced. Stocks in local yards scant and replenishment difficult on account of re-

stricted use of cars placed at mines. Production on about same basis as last week.

Birmingham and vicinity experienced the longest and most severe spell of cold weather the past week that has visited this section before in several years. Few householders laid in winter stocks last summer and the rush on local yards soon cleaned up practically all coal on hand. It was estimated that there was less than 5000 tons on hand at all yards in Birmingham, Bessemer and other suburbs. Dealers were swamped with orders which they were unable to fill and much suffering ensued. Restocking is difficult on account of much of the equipment placed at the mines being restricted in use and not available for relieving the local situation, even where the coal is available.

The shortage of steam coal is none the less acute, though not quite so pronounced. The priority order of Administrator Garfield has menaced the coal supply of furnace companies who have been called upon to furnish additional tonnage to the Southern Ry. and other lines, and relief is being sought by these interests to prevent any further crippling of furnace operations, which are already endangered by shortage of coke.

A centralization of authority to control the distribution of the output of this district in the hands of the local board would facilitate matters greatly, avoid confusion and bring about a more equitable and judicious distribution of the fuel supply, and preclude the possibility of priority orders issued direct from Washington directing that high-grade domestic coal be furnished railroads for fuel and confiscation under such orders of coal consigned under contract to public utility companies.

As it is, local boards are powerless to take the necessary steps to afford relief in acute situations which present themselves, but remedial orders must emanate from Washington. As a result, the coal supply is not equitably or judiciously apportioned where the needs are the greatest and most important, for these officials are not in touch with conditions in this territory.

#### Coke

#### CONNELLSVILLE

Car supplies very poor. Many blast furnaces banked. Dealers' margins may be allowed.

Car supplies in the Connellsville region averaged about 45 per cent. of allotments week before last, this being quite insufficient, while last week they averaged about 30 per cent., owing to the zero weather with which the week opened. This week Monday showed 45 per cent. and Tuesday 30 per cent., while 40 per cent. was promised for Wednesday. What little coke has been shipped in the past week has gotten through to destination fairly well, but the return of empties has been poor. It is possible that supplies will be better late in the week.

Meanwhile the blast furnaces depending upon the Connellsville region are showing an operation of about two-thirds of total capacity. The Carnegie Steel Co. is operating only 38 of its 59 blast furnaces and the other steel interests are in about the same position, while the merchant furnaces show a slightly better proportion.

While several priority orders have been issued in favor of Connellsville coke, they do not seem to be effective. Until the cold snap a trifle over a week ago the by-product coke plants were being well supplied with coal, by their priority order, but since then they have not been fully supplied. The priority order in their case carries more weight as it is intended not so much to stimulate the production of pig iron by the manufacture of coke as to stimulate the production of benzol, toluol and other by-products required in the manufacture of explosives.

There is no open coke market, as there are practically no offerings, the limited production being applicable on contracts. The set prices for beehive coke remain at \$6 for furnace, \$7 for selected 72-hr. foundry and \$7.30 for crushed, over 1-in. The fuel administration is considering a proposition to allow a margin on coke sales made by brokers, to be added to the set price, and predictions are made that within a few days margins will be set at 5 per cent. on furnace coke and 7½ per cent. on foundry, as maximum, this to apply also on resales or when the middleman guarantees the account.

The "Courier" reports production in the Connellsville and lower Connellsville region in the week ended Dec. 8 at 307,903 tons, an increase of 12,587 tons, and shipments at 310,129 tons, an increase of 25,349 tons.



**Buffalo**—The trade is without outward change, all coke coming in at contract prices and promising to do so right along. Bituminous jobbers who used to handle more or less of it are now unable to get any, as the ovens manage to ship out their entire product on their contracts. How the consumers who have no contracts manage to get a supply is not understood. The Government prices of \$7 and \$6 at the ovens for foundry and furnace are not in actual effect here.

## Middle Western

### GENERAL REVIEW

**Traffic demoralized. Zero weather prevails. Heavy snow throughout country, with the coal market in a panicky condition.**

Another cold wave with zero weather, accompanied by heavy and drifting snow, hit the Mid-West last Thursday. The wave was from the West, and from many points comes reports of the new record cold weather for the winter. Railroads are simply paralyzed, terminal yards gorged with coal that is badly needed at destination for the relief of distress. The best that any road has done for the past week was to furnish a 50 per cent. car supply, and some mines located on the Missouri Pacific report they have not had a car in 10 days.

The situation is but the fulfillment of the prediction made by the operators everywhere that the supply of coal was dependent on the railroads, and not the producers. Weather conditions clearly indicate that the transportation companies were not able to cope with the situation. The result is that all sections of the Mid-west that have any fuel are fast using up their supplies, with no immediate prospects of relief. The movement of coal is extremely slow, and because of zero weather and high winds the consumption has increased rapidly.

### CHICAGO

**Shortage very acute; cold weather brings increased demand.**

Extremely cold weather was experienced during the greater part of the week. There was also a heavy snow fall, which interfered with the yard movement of coal and engines. The motive power of the railroads and belt lines has been overtaxed for so long that real winter weather in its first stage saw their collapse, with little or no energy to combat the prevailing conditions. Since last Saturday passenger trains have been arriving from 5 to 30 hours late. In many instances out-going trains that usually run on time have left the terminals on a delayed schedule, because of the inability of the operating companies to make up and get engines ready to go out on time.

The Chicago market has for most of the time for weeks depended on daily deliveries. Because of the motive-power failure, this market is in a dangerous condition. As an index of the threatened situation, the public schools will close for a holiday period of three and possibly four weeks, when usually 10 days or two weeks has been the limit of suspension for Christmas. This is on account of the scarcity of fuel, and with the hope that an ample supply will reach the various schools to tide them over for the future (together with their regular channel of supply), so that it will not become necessary for them to close again after the three weeks' vacation.

Quotations in the Chicago market are as follows, per net ton, f.o.b. cars at mines:

	Williamson and Franklin	Saline and Harrisburg	Fulton and Peoria	Springfield	Cartersville	Grundy, La-Salle, Bureau and Will
Steam lump.....	\$2.65@2.80	\$2.65@2.80	\$2.65@2.80	\$2.65@2.80	\$2.65@2.80	\$3.10@3.25
Domestic lump.....	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	3.10@3.25
Egg or furnace.....	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	3.10@3.25
Small egg or nut.....	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	3.10@3.25
Stove.....	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	3.10@3.25
Chestnut.....	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	3.10@3.25
Pea.....	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	3.10@3.25
Washed egg.....	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	3.10@3.25
Washed stove.....	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	3.10@3.25
Washed nut.....	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	2.65@2.80	3.10@3.25
Mine-run.....	2.40@2.55	2.40@2.55	2.40@2.55	2.40@2.55	2.40@2.55	2.85@3.00
Screenings.....	2.15@2.30	2.15@2.30	2.15@2.30	2.15@2.30	2.15@2.30	2.60@2.75
Washed slack.....	2.15@2.30	2.15@2.30	2.15@2.30	2.15@2.30	2.15@2.30	2.60@2.75

	Clinton and Sullivan	Knox and Greene	Eastern Kentucky	Pocah. and W. Va.	Penna.	Hocking	West Va. Splint
Dom. lump.....	\$2.65@2.80	\$2.65@2.80	\$3.10@3.25	\$2.60@2.75	\$2.60@2.75	\$3.05@3.20	\$2.85@3.00
Steam lump.....	2.65@2.80	2.65@2.80	3.10@3.25	2.60@2.75	2.60@2.75	3.05@3.20	2.85@3.00
Egg.....	2.65@2.80	2.65@2.80	3.10@3.25	2.60@2.75	2.60@2.75	3.05@3.20	2.85@3.00
Small egg or nut.....	2.65@2.80	2.65@2.80	3.10@3.25	2.60@2.75	2.60@2.75	3.05@3.20	2.85@3.00
Mine-run.....	2.40@2.55	2.40@2.55	2.85@3.00	2.45@2.60	2.45@2.60	2.70@2.85	2.60@2.75
Screenings.....	2.15@2.30	2.15@2.30	2.60@2.75	2.10@2.25	2.10@2.25	2.55@2.70	2.35@2.50

### MILWAUKEE

**Cold weather increases the demand for fuel and renders the problem of delivery more acute. Supplies seemingly ample at present.**

The prevalence of genuine wintry weather throughout the Northwest has greatly increased the demand for coal everywhere, but thus far no reports of absolute shortage or distress have developed. W. N. Fitzgerald, state fuel administrator, seems to have the situation well in hand. His reports show that the people in the interior of the state are receiving ample supplies at present.

Milwaukee has a good supply of coal, but the problem of delivery has been rendered more acute by the zero temperature. This gives many the impression that there is a real scarcity of fuel. The truth is, there are not enough stations where anthracite can be procured, and because of the resultant congestion of teams and trucks it is hard to get fuel to the people. Consumers who buy direct from the yards and furnish their own conveyance are forced to pay more than the schedule price for hauling and handling.

To supply those who have not ready cash to buy coal in any great quantity, the Milwaukee Council of Defense, with the aid of the city authorities, is selling chestnut coal at several stations in the districts where the poor reside in lots of 30 to 500 lb. at 1c. per pound. Cash and no delivery is the rule.

No new price edicts have been received at Milwaukee. Dealers are abiding by the official schedule of profit, which, they hold, is insufficient under prevailing conditions. There are numerous complaints of the poor character of the anthracite which has reached this market the present season. Too much slate and a disposition to clinker is the burden of the indictments.

Another large cargo of anthracite was received during the past week. With the arrival of two cargoes of soft coal, now due, the Lake season will be at an end as far as coal receipts are concerned. One cargo of 7000 tons of soft coal was diverted to Sheboygan, Wis., because the steamer stranded and on being released had to be towed into that port where she will be forced to winter owing to her damaged condition. Illinois coal is coming in as fast as rail conditions will warrant. This fuel will probably have a larger market in Milwaukee in future.

### ST. LOUIS

**Transportation facilities practically disrupted. This is causing a shortage of coal everywhere that borders on the critical. Steam plants shut down, factories idle, and public buildings about to close. Railroads giving commercial coal priority shipment. Car shortage prevails, and coal tonnage cut two-thirds.**

St. Louis last week experienced perhaps the most critical situation that it has faced in many years on account of coal shortage. The big steel mills at Granite City and other plants in the switching limits of East St. Louis were idle on account of no fuel, throwing thousands of mechanics and laborers out of work.

In St. Louis several small plants shut down, and many other large ones have only a few hours' supply ahead. Many of the office buildings in the city were cold, depending on a few tons supply that they were able to get from different yards, and even officials of the Government buildings here had to go out and purchase coal on the open market, wherever they could get it, and then under pressure.

With thousands of cars of coal at East St. Louis, with water in the Mississippi

River the lowest it has been since 1860, all of the ferries frozen up, the Terminal had more than it could handle, in view of weather conditions, and the result was a complete tie-up.

The Fuel Administrator's office was swamped with requests and complaints of various kinds. This resulted in many telegrams being sent to Washington, asking that the Government intervene and do something to relieve the congestion. The Railroad Committee met with the Fuel Committee and promised to put the proposition up to the War Board of the Railways, which met the following day, and they in turn, issued an order that coal was to be given the priority shipment until Monday of this week, in order to relieve the situation. This began to produce good results at the end of the week, and indications are that the War Board will see that the situation is taken care of temporarily at least.

There has been practically no commercial tonnage out of the Cartersville field this week. The mines were idle over half of the time from lack of cars and the other part of the time they loaded railroad coal principally.

At several of the mines the men refused to go down because there were not enough cars on top to get a good start. At several places the locomotives were frozen up and could not move cars, and the intense weather froze up several operations.

There were several accidents throughout the field, causing deaths and also causing shutdowns, and everything, it seemed, worked against the production of anything near a reasonable tonnage.

In the Standard field there was a failure to deliver cars because the locomotives could not get water at the water tanks on account of their being frozen up and the same condition existed in this field as in the Cartersville.

Nearly all the tonnage in the Standard field was for railroad coal.

The latter part of the week Dr. Garfield issued an order, giving Lieut.-Gov. Crossley, Federal Fuel Administrator for Missouri, jurisdiction over Kansas City, Kansas, and East St. Louis, Ill., and the switching limits thereof. This resulted in the movement of about 75 cars of coal to St. Louis from the Cartersville field that were held up because the C. & A. R.R. had more than it could take care of for Chicago.

This will relieve the condition in the St. Louis and Kansas City markets to a great extent, now that one man has complete control.

On account of the danger to the public utilities at St. Louis several railroads were instructed to deliver all of their coal to these public utility plants, outside of Government requisitions. Lieutenant Governor Crossley took a fair stand and one that while it did not meet with the approval of everybody resulted in the most good to the greatest number.

The situation in the Mt. Olivet field is deplorable. There are no cars, while on one day there were 571 loads in the Mt. Olive field that the Washash could not move on account of no motive power. The bulk of this coal now is going to railroad needs, and very little is commercial.

In a general way the domestic situation here is not as critical as it is anywhere else in the country, but unless the situation improves soon it will be serious even here.

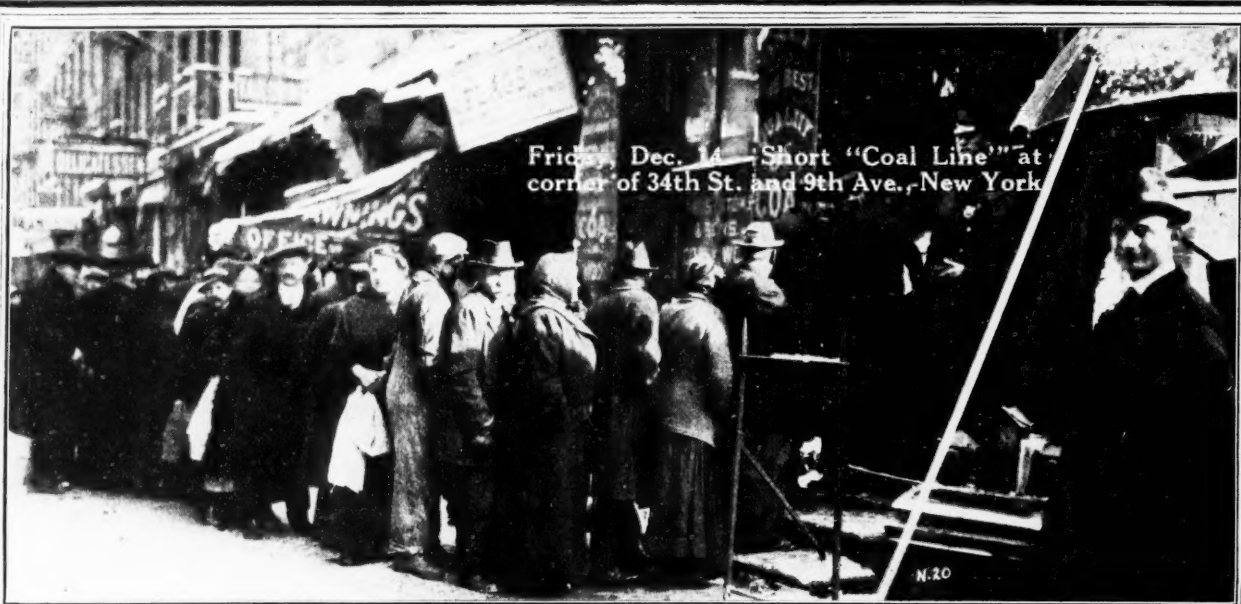
There are no eastern coals coming in and nothing from Arkansas. Coke has been taken off the domestic market altogether.

The retail circular is: Cartersville, \$5.75, Mt. Olive, \$5.25, Standard, \$5.00, anthracite grate and egg, \$10.10, stove and chestnut, \$10.35, West Virginia smokeless, \$9.75.

The wholesale circular is, per net ton, f.o.b. mine:

	Williamson and Franklin County	Mt. Olive and Staunton	Standard
6-in. lump.....	\$2.65@2.80	\$2.65@2.80	\$2.65@2.80
3x6-in. egg.....	2.65@2.80	2.65@2.80	2.65@2.80
2x3-in. nut.....	2.65@2.80	2.65@2.80	2.65@2.80
No. 2 nut.....	2.65@2.80	2.65@2.80	2.65@2.80
No. 3 nut.....	2.65@2.80	2.65@2.80	2.65@2.80
No. 4 nut.....	2.65@2.80	2.65@2.80	2.65@2.80
No. 5 nut.....	2.15@2.30	2.15@2.30	2.15@2.30
2-in. sergs.....	2.15@2.30	2.15@2.30	2.15@2.30
2-in. lump.....	2.65@2.80	2.65@2.80	2.65@2.80
3-in. lump.....	2.65@2.80	2.65@2.80	2.65@2.80
Steam egg.....	2.65@2.80	2.65@2.80	2.65@2.80
Mine run.....	2.40@2.55	2.40@2.55	2.40@2.55
Washed:			
No. 1.....	\$2.65@2.80	\$2.65@2.80	.....
No. 2.....	2.65@2.80	2.65@2.80	.....
No. 3.....	2.65@2.80	2.65@2.80	.....
No. 4.....	2.65@2.80	2.65@2.80	.....
No. 5.....	2.15@2.30	2.15@2.30	.....

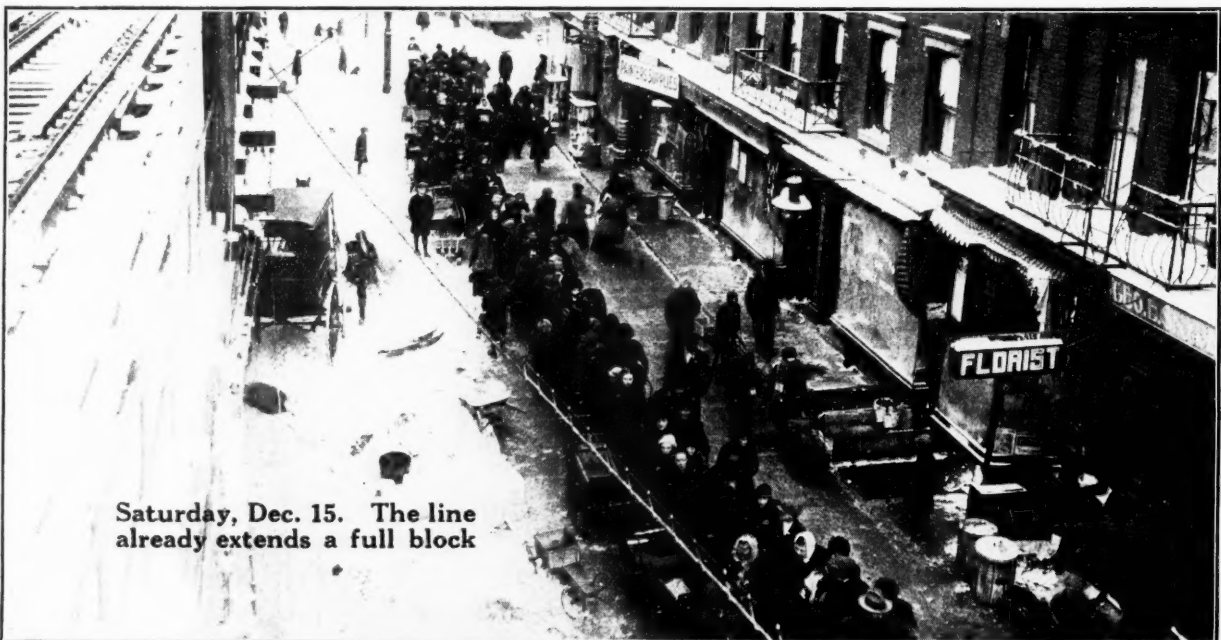
Williamson & Franklin Co. rate is 87c.; other fields, 72c.



## They Are Waiting for Your Coal

*These People Appeal to the Miners of  
America To Keep Up Their Good Work*

## And Still the Line Is Growing



Saturday, Dec. 15. The line  
already extends a full block